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STUDENT MANUAL September 1995

SHAPING THE FUTURE

FEDERAL EMERGENCY MANAGEMENT AGENCY
UNITED STATES FIRE ADMINISTRATION
NATIONAL FIRE ACADEMY

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FEDERAL EMERGENCY MANAGEMENT AGENCY

UNITED STATES FIRE ADMINISTRATION

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FOREWORD

The Federal Emergency Management Agency (FEMA) was established in 1979. FEMA's mission is to focus federal effort on preparedness for, mitigation of, response to, and recovery from emergencies encompassing the full range of natural and manmade disasters.

FEMA's National Emergency Training Center (NETC) in Emmitsburg, Maryland, includes the United States Fire Administration (USFA), its National Fire Academy (NFA), and the Emergency Management Institute (EMI).

To achieve the Academy's legislated mandate (under Public Law 93-498, October 29, 1974), "to advance the professional development of fire service personnel and of other persons engaged in fire prevention and control activities," the National Fire Academy has developed an effective program linkage with established fire training systems which exist at the state and local levels. It is the responsibility of this division to support and strengthen these delivery systems. Academy field courses have been sponsored by the respective state fire training systems in every state.

In further support of linkage with established professional fire service organizations, the NFA has agreed to develop field training in cooperation with the Training Resource Analysis and Data Exchange Program (TRADE).

One such cooperative project recommended to the NFA by TRADE is to develop training in the subject area of mid-level management for the fire service. TRADE has requested that the Academy develop two 2-day courses for field delivery.

The purpose of this training is to provide students with an understanding of concepts, functions, and responsibilities at the intermediate management level, as well as issues affecting mid-level management personnel in the fire service.

This course, *Shaping the Future*, will focus on the skills and techniques that a mid-level manager needs to provide leadership and direction for his or her fire department. The first module will have students focus on identifying opportunities (or problems). This will include discussions on the use of environmental scanning as a tool, the concept of paradigm shifts, and methods to reframe problems accurately. Mobilizing people to solve problems as groups, rather than continually using only the traditional fire service groups is the focus of the second module. It will include topics such as brainwriting and wholebrain thinking, problem-solving strategies, a discussion of benchmarking, and the need to involve resources outside the fire department and government. The third module will focus on the need to quantify, justify, and communicate decisions so they will be implemented effectively. Managing change will be discussed in the final module of the course. Why people resist change, overcoming that resistance, and monitoring and evaluating the change before, during, and after its implementation are topics that will be covered in this module.

The second course, *Managing in a Changing Environment*, will focus on the four major areas (economic, social, political, and technological) that have an impact on the future of the fire service.

The staff of the National Fire Academy is proud to join with state and local fire agencies in providing educational opportunities to the members of the nation's fire services.

ACKNOWLEDGMENTS

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COURSE GOALS

At the completion of this course, the students will be able to:

1. Employ creative approaches to identify problems having an impact on organizational effectiveness.

2. Given modern organizational problems, apply creative group problem-solving methods and describe the importance of continuous improvement within the fire service.

3. Quantify problems and solutions, and use the information to justify a recommendation.

4. Explain why people resist change and develop strategies for implementing change within the fire service environment.

TARGET AUDIENCES

Individuals presently assigned to management positions, e.g., chief officers who supervise company officers.

Individuals presently assigned to top-level management positions with limited opportunity for managerial development through formalized course work.

Company officers who are upwardly mobile within their organizations and whose chiefs of department wish to prepare them for increased managerial responsibility.

Administrative officers responsible for significant staff functions within the organization and who report directly to top management.

Firefighters assigned to positions with decisionmaking responsibilities.

COURSE OVERVIEW

Key points:

Module 1: Redefining the Present: Provides suggested approaches to identifying and prioritizing organizational problems.

Module 2: Finding Solutions in the Quality Environment: Explains how to use Total Quality Management (TQM) concepts and practices in solving organizational problems.

Module 3: Justifying Decisions: Focuses on the benefits of explaining problems and proposed solutions in terms of their impact on service delivery.

Module 4: Managing Change in the Fire Service Environment: Guides managers through the implementation of agreed-upon solutions despite potential resistance by others in the fire department.

Module 5: Course Conclusion: A review of the course materials, a chance for you to ask questions, and to take the examination. You also will have time to jot down some notes about actions you plan take when you return to your job.

MODULE 1: REDEFINING THE PRESENT

TERMINAL OBJECTIVE

The students will be able to employ creative approaches to identify problems having an impact on organizational effectiveness.

ENABLING OBJECTIVES

The students will:

1. *Use an environmental scanning process to identify existing or potential organizational problems.*
2. *Analyze the effect of paradigms on creative problem identification.*
3. *Identify specific fire service paradigm shifts which would improve future organizational effectiveness.*

NATIONAL STANDARD

The following section of NFPA 1021 (1992) is addressed in whole or in part in this module: 4-4.1.

VISION: THE POWER TO SHAPE THE FUTURE

A Global Perspective

Current management thinking emphasizes the need to analyze how well the organization "fits into" its environment. It is no longer sufficient simply to take care of internal organizational demands. Rather, future survival depends on our ability to visualize relationships and interdependencies between the local fire organization, the community which it serves, the state, the nation, and even the world. (See Figure 1-1 below.)

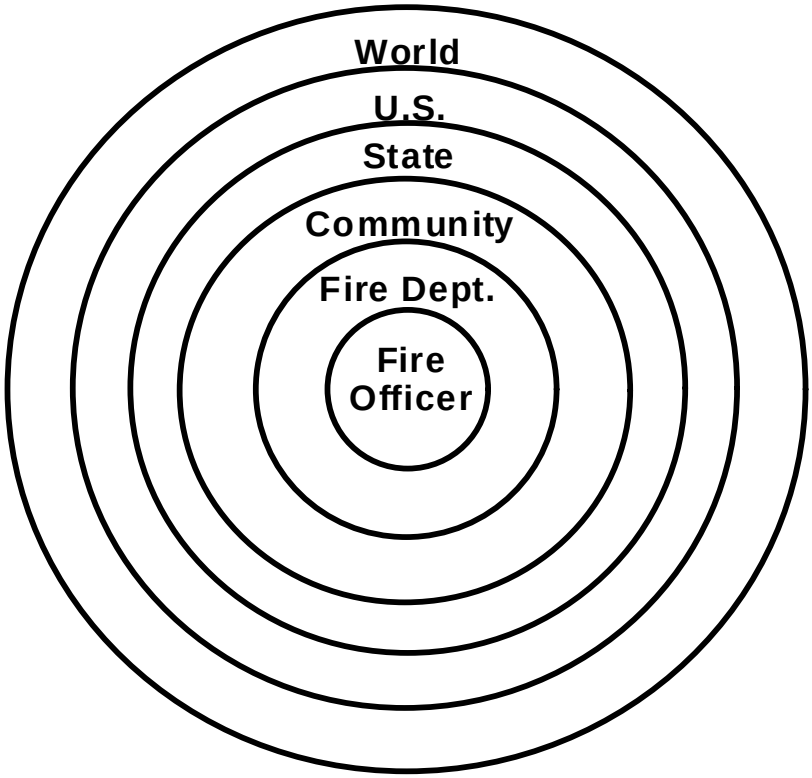

Figure 1-1
The "Big Picture"

When viewed from this perspective, it becomes apparent that--if we ever did--we certainly no longer control our own destiny. We are merely a small part of the global "big picture." External factors, including those right outside our doors as well as those at the other end of the world, affect how we operate on a day-to-day basis.

Public sector leaders no longer have the luxury of managing within an individualistic, rational, predictable organization. We now must learn to manage effectively within an increasingly complex and ambiguous environment.

Coping with Ambiguity

The complexity and unpredictability of today's organization creates an overriding sense of ambiguity in the workplace. This ambiguity may be defined as a lack of clarity about basic principles, confusion about various organizational issues, and/ or inability to define priorities clearly.

Following are causes or sources of ambiguity in today's public sector organizations. (Adapted from McCaskey, 1982)

- We are subjected to constant and unexpected change, making it difficult to predict our future accurately.
- Often, our leaders fail to develop and communicate a vision for the future and fail to provide needed guidance to employees.
- We often do not have sufficient, accurate information. There are serious breakdowns in communication throughout the organization.
- We are not sure what the problem is. Definitions of the problem are vague or competing, and any given problem is intertwined with other messy problems.
- We are not sure what we value anymore. Value conflicts arise between individuals, and among groups and organizations.
- We are not sure what is really happening. Information is incomplete, ambiguous, and unreliable.
- We can't agree on how to interpret the information that is available.
- We are not sure what we want. We have multiple goals that are either unclear or conflicting or both. Different people want different things, leading to political and emotional conflict.
- We cannot decide if individuals or teams should have priority.
- We do not have the resources that we need. Shortages of time, attention, or money make a difficult situation even more chaotic.

- We are not sure who is supposed to do what. Roles are unclear, there is disagreement about who is responsible for what, and things keep shifting as players come and go.
- We are not sure how to get what we want. Even if we agree on what we want, we are not sure (or we disagree) about what causes what.
- We are not sure how to determine if we have succeeded. We are not sure what criteria to use to evaluate success. If we do know the criteria, we are not sure how to measure them.

Whether we are a top-level, mid-level, or first-level manager, one of our primary weapons in combating this prevailing sense of confusion and helplessness is believing we can make a difference in shaping the future of the organization. In other words, we need a "future sense," described by Gelatt (1993) as "…the paradoxical attitude of not completely understanding today's chaos, not knowing what the future will be, and yet believing we can be a part of creating the kind of future we desire."

Expanding Your Managerial Perspective

The traditional approach to organizational problem-solving which emphasizes certainty and control does not meet the needs of today's leaders. A new approach is required; one that encourages creativity and flexibility. (See Figure 1-2.)

Traditional Approach	Alternate Approach
1. Emphasis on certainty and control.	1. Emphasis on flexibility and adaptability.
2. Viewing the organization from a limited perspective.	2. Viewing the organization as part of the "big picture."
3. Internal focus.	3. External focus.
4. Looking for the right answer.	4. Asking the right question.
5. Eliminating or avoiding conflict.	5. Accepting conflict as healthy.
6. Being uncomfortable with ambiguity.	6. Finding meaning and pattern amid the clutter and confusion.

Figure 1-2
Expanding Your Managerial Perspective

ENVIRONMENTAL SCANNING

One way to ensure attainment of the "holistic framework" described in Figure 1-2 is by a process called environmental scanning. It's part of a "process by which an organization attempts to control its destiny rather than allowing future events to do so." (Gordon, 1993)

Environmental scanning involves monitoring and tracking what is occurring, or about to occur, in our operating environments, both internal and external. Emerging trends, changes, and issues are monitored and evaluated as to their likely impact on the organization.

Such an approach is necessitated by a rapidly accelerating rate of change over which we have no real control. "Change itself has changed. It has been so rapid, so complex, so turbulent, and so unpredictable that it is now called 'white-water change'." (Gelatt, 1993)

The scanning process must be continuous--not simply a temporary *ad hoc* reaction to an unexpected crisis. It's a fundamental concession to the symbiotic relationship between an organization and the environments in which it operates.

The environmental scanning process is a fundamental part of a "systems approach" to organizational management. In short, systems theory focuses on the symbiotic relationship between an organization and its external environments. The organization depends on the environment for life-sustaining inputs (people, resources, funds, etc.). Then the organization transforms these inputs into products/services (outputs) which enrich the environment. (See Figure 1-3 below.)

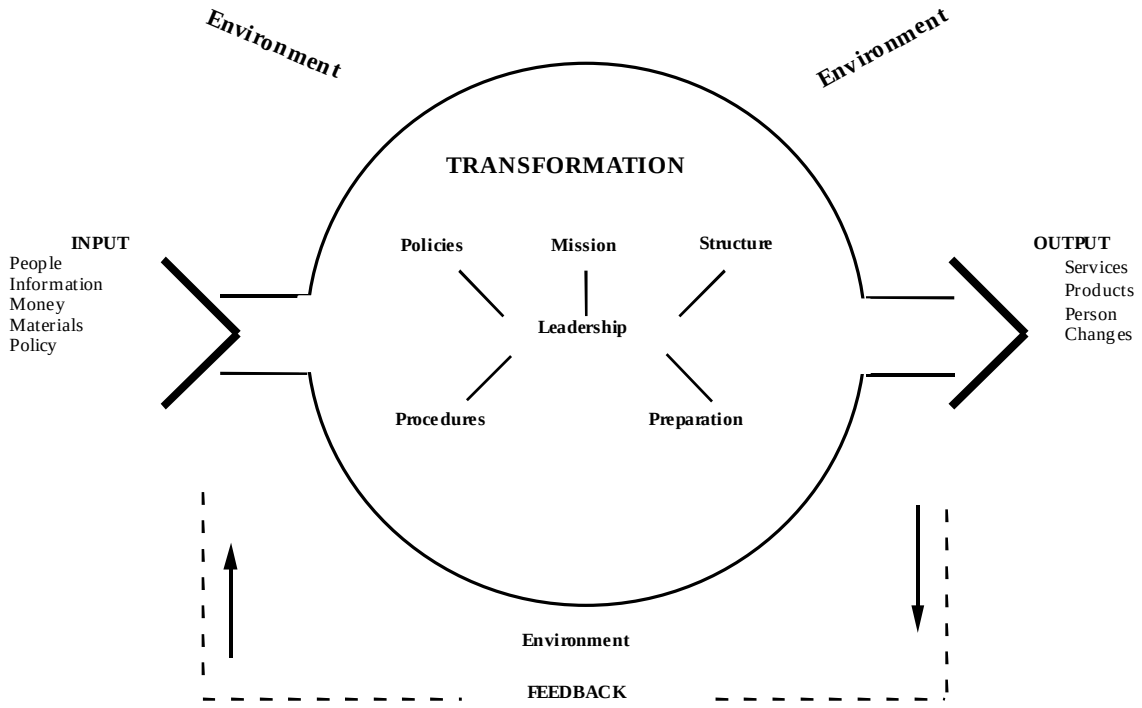

Figure 1-3
Basic Systems Theory

Purposes and Outcomes

The primary purposes for initiating a scanning process are (1) to better understand and manage the present situation; (2) to predict future events/issues which are likely to have an impact on the organization; and (3) to develop strategies for adapting to, learning from, and influencing our internal and external environments.

"In our normal thought processes, most of us are problem-solvers. We gather and analyze facts and data to reach an answer or a solution….As environmental scanners, however, we start from a known position and use facts and data to develop **questions**, not answers, and **problems**, not solutions." (Stoffels, 1982)

What to Monitor and How to Do It

In the external environment, we need to monitor issues and trends in the areas of information and technology, economics and finance, governance and politics, human resources and service delivery.

In the internal environment, we need to be cognizant of changing employee values, organizational culture shifts, responsiveness/ effectiveness of the organizational structure, and the relevance/acceptance of the stated organizational mission.

For each environmental factor we identify, we need to analyze its current impact on the organization and predict its likely future impact. One popular approach is to conduct a "SWOT" analysis--a detailed delineation of actual or potential **S**trengths, **W**eaknesses, **O**pportunities, and **T**hreats. (See sample on next page.)

SAMPLE "SWOT" ANALYSIS

Trend: Total Quality Management (TQM)

Let's suppose the fire department has observed an increasing trend among other city departments to institute TQM programs within their organizations. So, it does a "SWOT" analysis to try to determine whether or not to "join the crowd."

STRENGTHS--what strengths do we now have which would help in implementing a TQM program?

- A culture which thrives on doing things well.
- A value for quality.
- Excellent technical abilities throughout the work force.
- An excellent training division.
- Highly educated, progressive managers.

WEAKNESSES--what weaknesses do we now have which might hamper efforts to implement a TQM program?

- Lack of a quantitative database for assessing the quality of service delivery.
- Lack of a quantitative database for comparing customer expectations to customer satisfaction.
- Lack of knowledge about the TQM process.
- Lack of an established tradition of analytical problem-solving.

OPPORTUNITIES--what new opportunities might "go along with" implementation of a TQM program?

- The City Manager is a real TQM fan--we'll score points with her!
- It will make us look good in the eyes of the public.
- It's a great way to let the public know we really care.
- It will be a great opportunity to empower individuals throughout the organization.

THREATS--is the implementation of a TQM program likely to pose a threat to anyone?

- We may discover we're not as good as we thought!
- It will probably require a shift in resource allocation.
- Poor preparation can ruin the whole program and make us look bad.

FORMING AND SHIFTING PARADIGMS

What is a Paradigm?

Thomas Kuhn first described the concept of paradigms in his book, *The Structure of Scientific Revolutions*, to explain how science moved from one pattern or model of reality to another. Building off Kuhn's idea, Joel Barker has explored the impact of paradigms on society, organizations, and individuals.

A paradigm is a point of view, a frame of reference, a way of seeing things (Gelatt, 1993). Barker (1992) describes it as a set of rules and regulations that establishes boundaries and tells you how to behave within those boundaries.

In other words, our paradigms are our personal views of the way things are and the way things ought to be. They make us comfortable and provide a sense of security and control in threatening situations.

How Paradigms Affect Problem-Solving

But our paradigms have critical disadvantages as well. They create the lenses through which we view present realities and future possibilities. They filter incoming data and make them "fit" into a pre-existing frame of reference. They create personal and organizational "blind spots" because a **way of seeing** also is, by its nature, a **way of not seeing**!

Paradigm Paralysis

Eventually, the more entrenched our paradigms become, the less able we are to change. Paradigm paralysis is the inability to shift one's point of view. We get "stuck" or "frozen" in some specific frame of reference and are unable to see that things have changed and a new frame of reference is required.

The Cure: Shifting Your Paradigm

In his article "Future Sense," Gelatt (1993) advises that "flexpertise helps you get off the paradigm"! He defines flexpertise as the ability to continually adapt, innovate, and change.

It's the ability to abandon outdated paradigms and create more appropriate new paradigms. It's being flexible enough to "unfreeze" and "refreeze"

beliefs, knowledge, and attitudes as indicated by the changing environment.

Barker (1993) uses the metaphor of the American pioneer to illustrate the development of a paradigm shift. He compares the "pioneer mentality" (change-oriented risk-takers who rely on their intuition and courageously shape the future) to the "settler mentality" (change-resisters, low risk-takers, who like the *status quo* and will only move ahead when convinced it's safe).

Barker sees the role of the "paradigm pioneer" as a pivotal one in managing effectively in the 21st century.

"Making up one's mind, an essential skill of the past, may now be no more important than a new essential skill of the future--**learning how to change one's mind**!" (Gelatt, 1993)

THE REFRAMING PROCESS: PRELUDE TO A PARADIGM SHIFT

Our success in shaping the future is going to depend on our ability to redefine the present. We need to ask the right questions in order to seek appropriate answers; we must creatively define our present problems before we can develop effective solutions.

The challenge is to find new ways to view the world around us--to deliberately refocus/reframe our view of the world.

SUMMARY

Managerial success in the 21st century will be dependent on an ability to identify, articulate, and interpret internal and external environmental issues and trends. The environmental scanning process will provide the necessary data and facts. The ability to shift paradigms will ensure success in adapting to the changing information.

Activity 1.1

Environmental Scanning

Purpose

To identify specific ways in which present external trends are likely to have an impact on the future management of fire service organizations.

Directions

1. In your small group, complete one of the worksheets on the following pages, as assigned by the instructor.

2. For each trend listed on your assigned worksheet, brainstorm and list probable organizational impacts--both positive and negative. Use a flipchart to record these impacts.

3. If time permits, identify other present trends in your assigned category and list probable organizational impacts.

4. Designate a spokesperson to report group findings to the rest of the class.

Activity 1.1 (cont'd)

Worksheet #1

Information and Technology Trends

Trend	Likely Impacts
• Telecommunication advances	
• Office automation	
• Robotics	
• Computer technology	
•	
•	
•	
•	
•	

Worksheet #2

Economic and Financial Trends

Trend	Likely Impacts
• Tax limitations	
• Less federal support	
• Global competition	
• Downsizing	
• Alternative revenue sources	
•	
•	
•	
•	

Worksheet #3

Governmental/Political Trends

Trend	Likely Impacts
• Citizen involvement	
• Special interest groups	
• Regional problem-solving	
• "Right to Know" laws	
• Equal opportunity	
•	
•	
•	
•	

Worksheet #4

Human Resource Trends

Trend	Likely Impacts
• Cultural diversity	
• Work force migration	
• Increased education	
• Aging population	
• Quality of work life demands	
• Women in the work force	
• Employee empowerment	
•	
•	

Worksheet #5

Service Delivery Trends

Trend	Likely Impacts
• TQM programs	
• Focus on customer satisfaction	
• Alternative delivery mechanisms - Privatization - Consolidation - Regionalization	
• Incident Command Systems	
• More EMS/Less firefighting	
•	
•	
•	

Activity 1.2

Fire Service Paradigms

Purpose

To become aware of typical fire service paradigms that limit our ability to see the world as others see it.

Directions

Brainstorm and list paradigm shifts which have occurred in the fire service over the past 10 or 15 years. The first line is filled out as a sample for your use.

Old Paradigm	New Paradigm
Sample: Firefighting is our primary mission.	Sample: EMS is our primary mission.

Activity 1.3

Reframing the Present

Purpose

To use the reframing process to assist in creative problem identification and in determining potential paradigm shift requirements.

Directions

In your small groups, brainstorm and list on a flipchart responses to the following question.

> "What is it that you cannot do today which, if you **could** do it, would significantly alter the way you do business?"

ANNOTATED REFERENCE LIST

Barker, Joel A. *Discovering the Future*. (3-part video series: "The Business of Paradigms", "The Power of Vision," and "Paradigm Pioneers"). Burnsville, MN: Charthouse International Learning Corp.

Video #1, "The Business of Paradigms," helps answer the question: "Why is it so difficult to anticipate the future?"

Video #2, "The Power of Vision," tries to answer the question: "Why should we take the time to think about the future?" The premise is that creating a positive vision of the future is profoundly empowering.

Video #3, "Paradigm Pioneers," explains the risks of a "settler mentality" and emphasizes the importance of "Paradigm Pioneers"--those who drive new paradigms from rough concept into practicality.

Gelatt, H.B. "Future Sense--Creating the Future." *The Futurist*, September-October 1993, pp. 9-12.

Gelatt says it's important to **create** our future, not just try to predict it. But to do so, we need to overcome four "neuroses" which may get in our way (Future Phobia, Paradigm Paralysis, Infomania, and Reverse Paranoia).

ICMA. "Future Challenges, Future Opportunities: The Final Report of the ICMA Future Visions Consortium." *Public Management*, July 1991, Center Insert.

In 1988 the ICMA launched the Future Visions Consortium, a group of 65 local government managers whose charge was to identify developments likely to affect local government and to develop strategies for coping with them. The report summarizes the consortium's final predictions on observed critical trends and their implications for local government in the coming decade.

Pfeiffer, J. William, Leonard D. Goodstein, and Timothy M. Nolan. *Applied Strategic Planning: A How to Do It Guide.* San Diego: University Associates, Inc., 1986.

Pfeiffer has long been recognized as an excellent source of information on the strategic planning process. This text is a comprehensive, easy-to-follow guide for anyone interested in getting started.

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MODULE 2: FINDING SOLUTIONS IN THE QUALITY ENVIRONMENT

TERMINAL OBJECTIVE

Given modern organizational problems, the students will be able to apply creative group problem-solving methods and describe the importance of continuous improvement within the fire service.

ENABLING OBJECTIVES

The students will:

1. *Define three types of problem-solving approaches.*
2. *Identify personal barriers to their creativity.*
3. *Define the concept of "Kaizen."*
4. *Define the term "benchmarking."*
5. *Identify three advantages realized through benchmarking.*

NATIONAL STANDARD

NFPA 1021 does not explicitly address group problem-solving, decisionmaking, creativity, benchmarking, or continuous improvement. However, such skills may be implicitly addressed or used within the following sections:

Fire Officer I	2-2.1, 2-2.6, 2-4.3, 2-13.2
Fire Officer II	3-2.1, 3-2.2, 3-10.2, 3-11.2
Fire Officer III	4-2.2, 4-3, 4-4, 4-5.2, 4-5.5, 4-10, 4-13
Fire Officer IV	5-2, 5-5.2, 5-5.9, 5-10.3

INTRODUCTION

The modern fire service is faced with the most challenging operational environment in history. Many times, the administrative demands on the modern fire officer can overwhelm even the most experienced person. Problem-solving is only one of many talents which today's fire officer must possess. Individual problem-solving skills will assist fire officers in directing the work unit to which they are assigned.

But few fire officers work within an environment in which they are totally alone and are expected to solve complex problems by themselves. The vast majority of fire officers today coordinate and perfect the problem-solving and decisionmaking skills of work teams. In many cases, those work teams are fire companies striving to deliver fundamental life safety response to a community; in some cases, they are bureaus saddled with responsibilities to enforce the fire code, educate the public, train fire department employees, prepare and administer dwindling budgets, dispatch calls, repair apparatus and equipment, or provide logistical services.

In all cases, those work teams are faced with an ever-growing demand to analyze and discover customer needs and meet them rapidly. The concept of empowerment is spoken of often by managers, authors, and educators. Empowerment implies the "empowering for decisionmaking" of those work units or teams that touch the public with their services, as well as the empowering of teams that serve in support roles inside a fire department.

This module will examine the need and capabilities of work groups to effect good decisions through modern problem-solving techniques. You will learn something about the problems that face you. You will see the need to develop a team that possesses innovative and creative problem-solving skills. At the end of this module, it is hoped that you will begin to see the opportunities that challenge your team psyche. The opportunities are many, but it is the creative team manager and innovative team members who, together, will find themselves successful in the challenging frontier of tomorrow's fire service.

WHAT IS A PROBLEM?

There are actually different types of problems. In fact, one of the first steps in being a good problem-solver is to identify and classify the type of problem that faces you or your team. In essence, identifying the type of problem that you face greatly reduces the time required to solve it. A good definition of a problem is simply "the difference between what one

has and what one wants." (de Bono, 1970) It is that simple. But problems can and do vary in their complexity and construction.

Three Common Types of Problems

There are three common types of problems, and the solutions required determine the type of problem. The first type of problem is when more information is required for the solution. You could classify this problem as an information shortfall. Many of our problems fall into this category.

For example, suppose you are assigned to a fire company that is dispatched to a location somewhere on Central Avenue, a prominent thoroughfare in your community. However, Central Avenue has five separate sections. You have the first type of problem: incomplete information. In this case, you need an address. This is, in fact, a common problem encountered by responders. The numbers which separate the various sections of Central Avenue are divided and usually referred to as "split numbers." The problem is clearly one that requires additional information to solve.

The second type of problem is more complex. In this type, the solution requires a rearrangement or restructuring of information. (de Bono) Here, the solution is usually visible and attainable. The difficulty arises from the fact that to solve the problem, you are required to change your perspective or approach to the problem and to its solution.

For example, imagine that your fire department wants to implement a new public education or code enforcement program in the community. The community leaders, in fact, suggest that your department undertake the project but offer you no additional funding. What can you do? Without implementation, your community might suffer an increased life safety risk, and your department might be cut. Thus, the pressure of the situation allows you to look to existing employees who can assume the additional responsibility. You decide that fire suppression personnel can take on the new role. It is not the ideal solution, but it can work. Solving the problem required you to reorient yourself and the department to expanding community responsibilities--perhaps to protect jobs.

Finding Hidden Solutions

The third type of problem is one which has emerged during the past decade. With this type, the solution is totally obscured. In fact, on the surface, no problem exists; it is hidden. (de Bono, 1970) The private sector has felt the impact of this concept for quite some time because it is the inherent need associated with successful modern business--continuous

improvement. The nation's fire service has not felt the pressure of this type of problem until recently.

Certainly, the problem does not manifest itself in this manner in all cases. There are numerous occasions where organizations fail to see a visible problem, and suffer because of it. But the common manifestation of this third problem is illustrated by the U.S. automobile manufacturers which failed in the 1960s to see the emerging trend toward smaller, gas-efficient automobiles. The Japanese envisioned the trend, planned to capitalize on it, and now find themselves successful, at the expense of the "big" car companies. The concept tied to this problem-solving approach is sometimes called "Kaizen," a Japanese term associated with continuous improvement. Essentially, this third type of problem is the most difficult to detect, yet it may be tied directly to our organizational existence well into the next century. It is this third area, finding hidden solutions, which will be the focus of this module; later in this module, the concept of Kaizen will be expanded.

THINKING AND PROBLEM-SOLVING

Creativity and Innovation Ability

Addressing problems from an individual or group approach presents similar challenges. Arriving at viable solutions relates directly to creative and innovative skills possessed by individuals and the group. If the creative skills are present and are allowed to prosper, then reliable solutions to problems are the result. If, on the other hand, the individual or group faces barriers to creative thought, then solution accuracy may suffer.

Barriers to Creative Thought

Barriers to creative ability have been identified by researchers. They are found in two areas--internally, manifesting themselves as psychological obstacles, and externally, manifesting themselves within the work environment. (Martin, 1990) Internal barriers are those we, through development, have acquired. They are such things as our hesitancy to be open to new experiences; our rigid, closed thought patterns; our inability to address conflict; and our reluctance to accept criticism. External barriers are those with which our organizations thwart our creativity. They are the stifling of free thinking; close supervision and scrutiny; lack of trust; and lack of empathetic supervisors.

Many of the barriers to our creativity are personal. (Adams, 1979) Because they are personal, we can overcome these barriers; we merely have to identify them. Some barriers are perceptual; that is, the way we view or see things. We sometimes fail to use all of our senses to approach problems. We may fail to investigate the obvious and blindly take action. We may fail to see cause and effect, thereby misreading the reasons why something went wrong.

Some barriers are cultural. We may want to conform to group norms, seeking acceptance. Such actions may cause us not to mention something that could avoid a later problem. We might fear criticism for failure. The pressure to compete within our groups might be overwhelming and stifle our openness to be creative. Or, we may feel driven to be economical above all else, thereby compromising a safety issue.

Other barriers to our creativity may be emotional. Because of past failure, we may fear making a mistake. We begin to mistrust others; we fail to take reasonable risks; we grab the first idea to come along; or we just don't think.

Finally, barriers to our creativity may be environmental. The workplace may contain distracting noise and an unfavorable temperature. The spaces in which we work and think may be cramped or not conducive to creative contemplation. The organization may impose unfair timeframes on our work; or the supervisor of our work group may "hover" over our work and our decisions.

Becoming aware of the barriers to our creativity is the first step toward improving our problem-solving skills. Once we identify our barriers, we can systematically begin to overcome them. We can start down a road toward professional development which will build reliable problem-solving ability.

PROBLEM-SOLVING STYLES WITHIN A PROBLEM-SOLVING MODEL

There are primarily two processes associated with problem-solving. These differ essentially in the way the brain handles information during problem-solving phases. Divergent thinking seeks to expand or enlarge the picture of the problem. It involves approaching the problem from different angles, breaking it apart, rearranging it, inverting it--essentially blowing it apart to delineate it. Divergent thinking enlarges the view to assist us in ensuring that we understand the problem before we move toward choices or solutions. (Albrecht, 1980)

Convergent thinking is just the reverse of divergent thinking. Convergent thinking reduces the problem or narrows it toward closure. It reduces the size and scope so that the problem can be more easily managed or handled within the thought process. Convergent thinking is the process by which we focus in on key factors of the problem, analyze them, and evaluate options toward a solution. (Albrecht, 1980)

Thinking and the Problem-Solving Model

Both divergent and convergent thinking play an equally important role in effective problem-solving. (See Figure 2-1.) Divergent thinking takes place during the expansion phases of problem-solving. In those phases, we involve ourselves with finding the problem, then delineating or stating the problem, and ultimately with finding or discovering options to solve the problem. It is the expansion phase that demands our creative skills, if we are to be effective. Divergent thinking puts demands on our acquired abilities because we have been programmed thorough our experience and education systems to think convergently. The divergent thought processes, for most of us, are not well tuned. (Albrecht, 1980)

Convergent thinking occurs in the closure phase of problem-solving. During this phase, we decide on the best option, take action, and evaluate the results of our decision. In this phase we traditionally find ourselves most experienced as problem-solvers because our historical approaches have taught us how to converge in our thought processes. However, depending on our creative abilities, many of us find ourselves in problem solutions that may not have been our best options. It is important that we consciously apply ourselves to a more efficient divergent approach. (Albrecht, 1980)

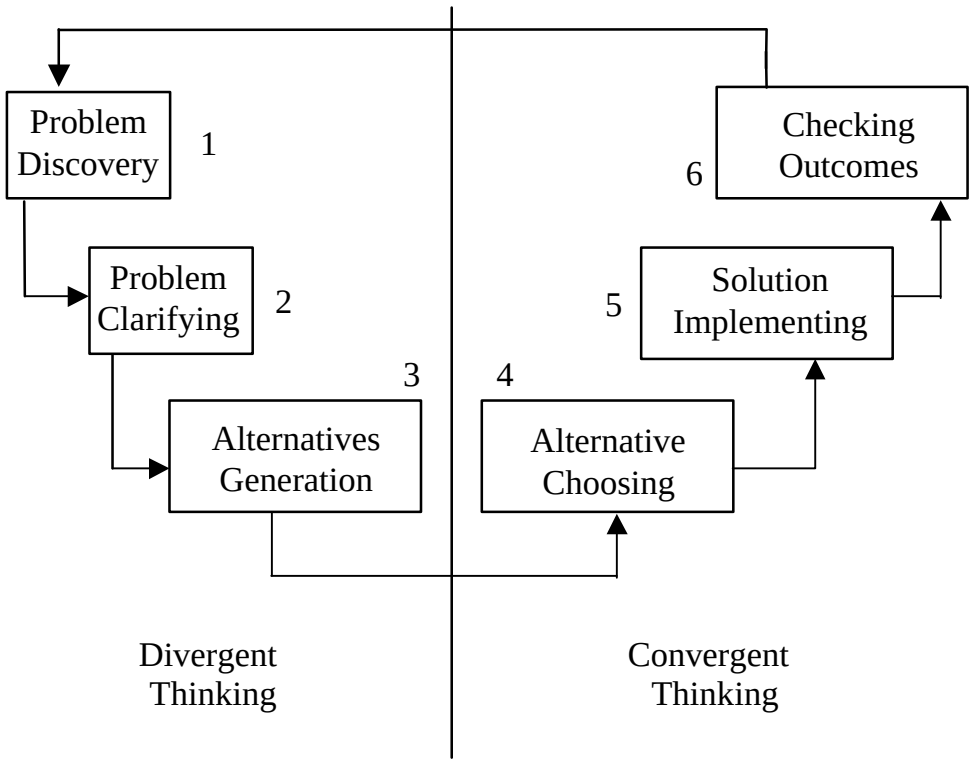


Figure 2-1
Thinking and the Problem-Solving Model

(Adapted from Albrecht, 1980)

Paradigms Versus Divergent Thinking

A common obstacle faced in divergent thinking is formed by our paradigms. Paradigms are the boundaries within which we think and form our thoughts. For instance, if you were asked to close your eyes and envision a chair, what would you see? You would probably envision something with four legs, a seat, a back, and perhaps some arms. But most of us would not imagine something different, like a beanbag chair. Most of us imagine the four-legged chair because our paradigm of a chair limits our thinking.

To be creative, we must move outside our paradigms. To do so, most of us require assistance, at least in the beginning. How can we practice using divergent thinking? Our creativity and thinking are stimulated by crossword puzzles; mechanical puzzles, like a Rubick's Cube; and any game which challenges alternative thought. Through creative thinking and paradigm shifting we are able to apply modern problem-solving approaches to the competitive environment in which our fire service operates today and will operate in the future. The following sections of

this module will examine the direction our fire departments must take to ensure stability and success.

"KAIZEN"--CONTINUOUS IMPROVEMENT

Modern demands and expectations of our citizen customers require that we do a better job of planning for the delivery of fire services. Such planning must analyze the level of service expected by individual citizens and the level of service expected by the community. Today, planning must incorporate the concept of continuous improvement in all areas of service delivery.

Continuous improvement is a proven concept, adopted by the Japanese more than 40 years ago. The Japanese word for the concept is "Kaizen," which means, essentially, "the never-ending quest to be just a little bit better, every day, in every activity." (McNair, 1992) "Kaizen" came from a Japanese philosophy that our way of life (work, social, home) deserves to be constantly improved.

Many fire service organizations have just maintained the *status quo* for years. Those organizations find themselves threatened and vulnerable because the whole concept of consumers and citizens has changed. The *status quo* now means that the organization is not keeping up with the world--because the world is changing. The *status quo* means that society and its service needs are passing the organization by. That loss of position in the community could be fatal to a fire department. The private sector will fill any vacuum in public-sector work.

Employee's Role in Kaizen

What does this mean for the fire service? It means that every employee must become an integral part of the decisionmaking process as it relates to the delivery of our services. It means that something must be added almost daily to aspects of our services in order to deliver to the customers (citizens) more than they expected to receive. It means that customer needs must be evaluated constantly and that the changes in service delivery must be made quickly. The organization cannot survive if changes that will bring improvement have to go through multilevels of organizational bureaucracy for approval. The true definition of empowerment means that employees at the service-delivery level are allowed to make decisions and initiate quality-improvement changes.

Management's Role in Kaizen

This new approach means that management, too, must change. Traditional management approaches have seen the fire service ranks filled with autocratic supervisors who require subordinates to "run" everything past them before any action is taken. Those are the same approaches that corporate America took during the decades in which the U.S. lost the competitive race to supply the world with cars, electronics, and steel.

Fortunately, the fire service has in the past remained somewhat immune from the pressure of competition as found in the private sector, but those days of immunity are gone. The fire service must adopt Kaizen concepts and rapidly implement programs which will respond to customer needs quickly and more cheaply. Managers play an important role in this initiative. They become facilitators of this change, identifying potential value-added options to service delivery, and encouraging employees to adopt and practice new methods. Managers continue to monitor the precarious service-delivery frontier, looking for the pitfalls and guiding where the organization must go.

Is middle management threatened by the empowerment of employees and the continuous improvement concept? While large departments are downsizing and rightsizing, middle managers are the webbing which will link the strategic planning and policy-making levels of the organization to the service-delivery levels. Middle managers act as explorers and scouts for the organization, facilitating the delivery of valued-added services to the citizens. Middle managers truly become the movers and shakers of this new approach, and they will require greater interpersonal skills in order to be successful. **Those who can create and maintain the motivational environment for Kaizen effectively will become valuable assets to organizations.** Kaizen is not easy. It requires diligence and talent to enlist the cooperation of people and to maintain their focus on quality day in and day out.

Benefits of Kaizen

What are some of the benefits of Kaizen? First, Kaizen generates process-oriented thinking. Such thinking looks at the **way** things are done rather than **what** is done. The emphasis is placed on what the customer expects, then meeting or exceeding that expectation. It is people-oriented and bridges the gap between services provided and the results to the public.

Second, Kaizen involves the whole organization in problem-solving. The process is group oriented, not at the top as tradition has held, but throughout the organization, and particularly at the service-delivery level.

Problem-solving groups, to be effective, require creativity and an ability to think divergently. This is easier if people at all levels are involved.

Third, Kaizen creates a lateral networking of the organization. Service-level units talk directly to one another. Communication within the organization is improved, and this new lateral dependency creates a greater loyalty among groups to the common life-safety focus of the department.

Fourth, Kaizen creates a citizen-driven responsive service-delivery capability. Customer satisfaction is monitored continually and measured. Modifications are implemented and those, too, are monitored and measured. Mid-level managers play a prominent role in this process since they evaluate the level of citizen satisfaction and expectation for services.

Finally, Kaizen firmly implements the process of change within the organization. When continuous improvement becomes the accepted practice in the fire service, change will not be such a traumatic experience for our employees. Change becomes, in a sense, the *status quo*--an interesting thought.

BENCHMARKING

Effective group problem-solving requires as many creative approaches from group members as can be gathered. A useful technique is to examine other organizations which have experienced similar problems to determine how they solved them. While the other organization may have erred, it may have discovered a unique, progressive solution which sets it apart from others. Such a case is said to be a benchmark--a standard to which others might strive. The process of researching and learning about the best practice from other organizations is called benchmarking.

The modern fire service finds itself in the midst of a rapidly changing society. Economic and political forces combine to introduce added stress on organizations. It has become imperative to seek and to become a benchmarking organization. Without such efforts, the fire department becomes an "at risk" entity floundering in a threatening environment.

How Benchmarking Began

In 1979, the Xerox Corporation found itself in such a situation. Japan was producing copy machines, shipping them, marketing them, distributing them, and selling them cheaper than Xerox could make them. Because of this remarkable capability, Xerox lost nearly 50 percent of its market share to the Japanese. Robert C. Camp, a Xerox manager, happened upon the

idea of looking at what the Japanese did well during specific phases of their copier manufacturing and distribution process. He convinced the company to adopt these methods, as well as the team approaches to problem-solving which resulted in continuous improvement. The rest of the story is history. Xerox came back, and today is, again, a world leader in copiers. The concept which Robert Camp founded was named benchmarking--for when a process or practice was identified as the best, it became the benchmark to strive toward. (ASTD, 1992)

How to Become a Benchmarking Organization

The fire service should adopt a policy to allow individual work units to carry out the five steps of benchmark implementation developed by Robert C. Camp (1989) at Xerox. The first step is to determine what should be benchmarked--a code enforcement program, a hose load, a ladder-raising procedure, a dispatching procedure, etc. The unit then should research which department is doing the practice well and collect data to substantiate the practice.

Second, the unit should analyze the current gap in performance being experienced and the benchmark of the organization being studied. The unit should estimate its future performance expectations if the benchmark were to be adopted. Such expectations should be extended over a long period to see if the benchmark will reap long-term benefits.

Third, the unit should introduce the practice by marketing and promoting the new process within the organization. Particular emphasis should be given to explaining why the new practice will benefit the citizen and employees.

Fourth, the unit should fully implement the practice through the development of action plans and specific, measurable objectives. The new practice becomes a normal operating procedure.

Finally, when the practice has become a routine method and has gained acceptance universally by the organization, then the benchmark is said to have reached organizational maturity.

Benchmarking is quickly becoming the chosen method for manifesting a Kaizen approach within an organization. The fire service should adopt the principles of Kaizen and benchmarking, and strive to deliver continuing service quality to the communities it serves. It is what citizens expect, and it could protect the existence of the organization.

Mobilizing a Creative Problem-Solving Environment

How can we, as fire officers, bring about a creative problem-solving environment for our work teams? First, we must fine-tune the external work environment for our employees. We must ensure that they have adequate tools and resources to do the job. We can assist them in the setting of realistic, challenging work goals. We can reduce the amount of direct supervision, especially in routine duties. We can provide timely feedback to employees regarding their work and their performance. (ASTD, 1989)

Second, we can encourage our employees to take risks. In doing so, we must be careful to avoid criticizing their failures. Such a process is not easy. We should encourage independent thought and action, permit humor, laugh a lot, and ensure that the work site allows for periods of concentration and study. Above all, continually encourage employees to persist in their efforts to generate quality service delivery.

Finally, establish a group climate that reinforces members by recognizing their team and individual efforts. The recognition must be open and in the midst of their peers--those whom they most respect. Openly confront conflict, but not in an authoritarian manner: maintain composure and talk out issues. Find common ground. Above all, listen. Finally, establish and strive to maintain intense respect and trust within the group.

SUMMARY

Modern problems confronting the fire service demand that we, as fire officers, employ creative techniques as we tackle our decisions. Internal barriers to creative thought are within our personal abilities to change. We must recognize them and seek to develop our creative skills. External barriers are not as easy, especially if our organizations do not choose to correct them. We as supervisors need to be keenly aware of the external controls which we can alter, and strive to correct them.

Personal awareness of creative barriers gives us the opportunity to begin the process of refinement and development which can solve our personal limitations toward innovative thought.

The concept of Kaizen, or continuous improvement, is a proven approach which the Japanese have used to become producers of high-quality products sought after by the world. The fire service can use the same approach to serve communities better and to protect the organization against the constant threat of budget annihilation and personnel reductions.

Benchmarking, adopting best the practice, is more than just stealing an idea from someone else. It means taking a good idea and making it better, through Kaizen.

What then must we do to become successful mid-level managers? We must improve and improve continuously. We must become zealots in the effort to deliver more and better services at lower cost. We must become the facilitators of work groups which will, through inspiration, continually deliver services beyond the expectations of citizens. It does not come easy. Yet the goal is very much worth the journey.

Activity 2.1, Part 1

Inventory of Creative Thought and Innovative Action

Purpose

To identify barriers to creative thought.

Directions

For each of the statements in this inventory, refer to the following scale and decide which number corresponds to your level of agreement with the statement; then write that number in the blank to the left of the statement.

Strongly Agree	Agree	Agree Somewhat	Disagree Somewhat	Disagree	Strongly Disagree
1	2	3	4	5	6

_____ 1. I evaluate criticism to determine how it can be useful to me.

_____ 2. When solving problems, I attempt to apply new concepts or methods.

_____ 3. I can shift gears or change emphasis in the abstract.

_____ 4. I get enthusiastic about problems outside my specialized area of concentration.

_____ 5. I always give a problem my best effort, even if it seems trivial or fails to arouse enthusiasm.

_____ 6. I set aside periods of time without interruptions.

_____ 7. It is not difficult for me to have my ideas criticized.

_____ 8. In the past, I have taken calculated risks and I would do so again.

_____ 9. I dream, daydream, and fantasize easily.

_____ 10. I know how to simplify and organize my observations.

_____ 11. Occasionally, I try a so-called "unworkable" answer and hope that it will prove to be workable.

_____ 12. I can and do consistently guard my personal periods of privacy.

Strongly Agree	Agree	Agree Somewhat	Disagree Somewhat	Disagree	Strongly Disagree
1	2	3	4	5	6

_____ 13. I feel at ease with colleagues even when my ideas or plans meet with public criticism or rejection.

_____ 14. I frequently read opinions contrary to my own to learn what the opposition is thinking.

_____ 15. I translate symbols into concrete ideas or action steps.

_____ 16. I seek many ideas because I enjoy having alternate possibilities.

_____ 17. In the idea-formulation stage of a project, I withhold critical judgment.

_____ 18. I determine whether an imposed limitation is reasonable or unreasonable.

_____ 19. I would modify an idea, plan, or design, even if doing so would meet with opposition.

_____ 20. I feel comfortable expressing my ideas even if they are in the minority.

_____ 21. I enjoy participating in nonverbal, symbolic, or visual activities.

_____ 22. I feel the excitement and challenge of finding a solution to problems.

_____ 23. I keep a file of discarded ideas.

_____ 24. I make reasonable demands for good physical facilities and surroundings.

_____ 25. I would feel no serious loss of status or prestige if management publicly rejected my plan.

_____ 26. I frequently question the policies, objectives, values, or ideas of an organization.

_____ 27. I deliberately exercise my visual and symbolic skills in order to strengthen them.

_____ 28. I can accept my thinking when it seems illogical.

Strongly Agree	Agree	Agree Somewhat	Disagree Somewhat	Disagree	Strongly Disagree
1	2	3	4	5	6

_____ 29. I seldom reject ambiguous ideas that are not directly related to the problem.

_____ 30. I distinguish between the trivial and the important physical distractions.

_____ 31. I feel uncomfortable making waves for a worthwhile idea if it threatens the inner harmony of the group.

_____ 32. I am willing to present a truly original approach even if there is a chance it could fail.

_____ 33. I can recognize the times when symbolism or visualization would work best for me.

_____ 34. I try to make an uninteresting problem stimulating.

_____ 35. I consciously attempt to use new approaches to routine tasks.

_____ 36. In the past, I have determined when to leave an undesirable environment and when to stay and change the environment (including self-growth).

Activity 2.1, Part 1 (cont'd)

Scoring Sheet

Directions

Transfer your inventory responses to the appropriate blanks provided below. Then add the number in each column, and record the total in the blanks provided.

A		B		C		D		E		F	
1.	_____	2.	_____	3.	_____	4.	_____	5.	_____	6.	_____
7.	_____	8.	_____	9.	_____	10.	_____	11.	_____	12.	_____
13.	_____	14.	_____	15.	_____	16.	_____	17.	_____	18.	_____
19.	_____	20.	_____	21.	_____	22.	_____	23.	_____	24.	_____
25.	_____	26.	_____	27.	_____	28.	_____	29.	_____	30.	_____
31.	_____	32.	_____	33.	_____	34.	_____	35.	_____	36.	_____
	_____		_____		_____		_____		_____		_____

Column Totals

STOP

Go no further until your instructor tells you.

Activity 2.1, Part 2

Inventory of Creative Thought and Innovative Action

Purpose

To identify barriers to creative thought.

Directions

1. Read the directions for completing the Profile Sheet.

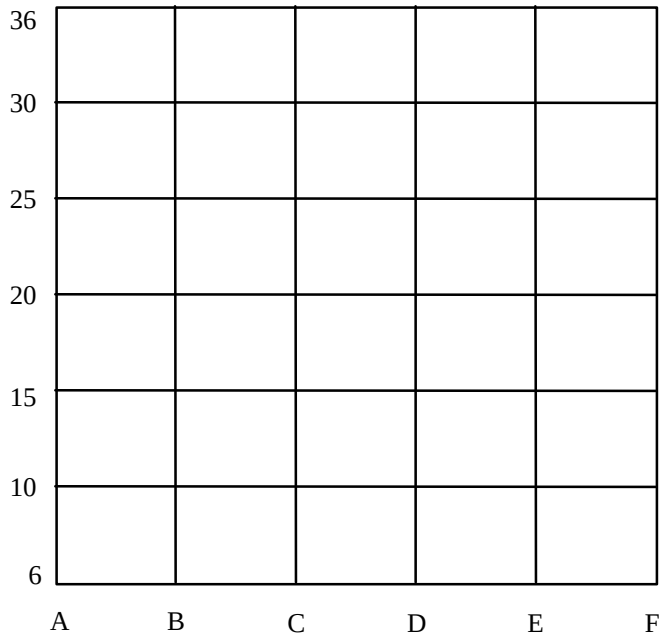
2. After you have read the directions, complete the Profile Sheet individually.

Activity 2.1, Part 2 (cont'd)

Profile Sheet

Directions

Plot the scores from your scoring sheet onto the following graph. The vertical axis, which represents your numbered scores, ranges from 6 to 36. The horizontal axis, which represents the columns on your scoring sheet, ranges from A to F. The key at the bottom of this page identifies the barriers in each column. Connect the points you have plotted with a line. The high points represent your barriers to creativity.



Key to Barriers

A = Barriers related to concept of self: self-esteem, self-confidence, handling of rejection, and ability to confront differing opinions.

B = Barriers related to need for conformity: inclination to break away from pattern, to take risks, to express one's ideas, to scrutinize traditional views, and to challenge standard practices.

C = Barriers related to ability to abstract: tendency to use the unconscious mind, to view things in holistic or visual ways, and to rely on intuition.

D = Barriers related to ability to use systematic analysis: tendency to use the conscious mind, to apply logic, to think sequentially, to organize ideas, and to rely on facts or data.

E = Barriers related to task achievement: work patterns, persistence, attitudes toward others, and resourcefulness.

F = Barriers related to physical environment: variables associated with physical surroundings, distractions, personal space, and privacy.

Activity 2.2

Divergent Thinking and Problem-Solving

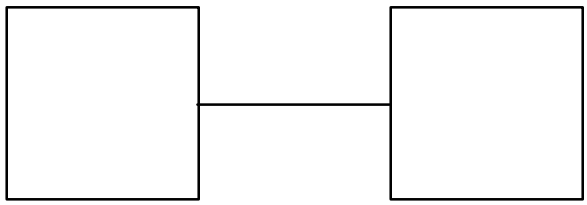
Purpose

To challenge our paradigms, and to illustrate the need to force ourselves past the paradigms to think creatively.

Individual Directions: For each object shown below, individually list as many ways to describe the figure as you can think of. Be creative.

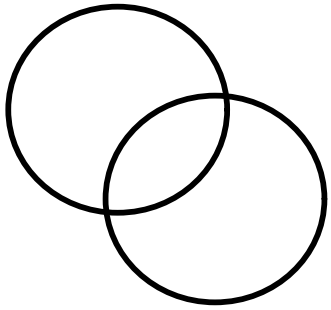
Group Directions: In small groups assigned by your instructor, discuss individual findings, then combine them into a group list. If possible, discover more descriptions for the objects. Select a group spokesperson to present your list to the class.

Object 1



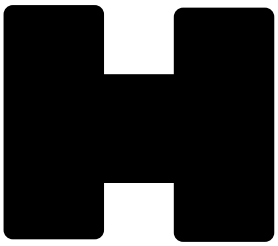
1. _____
2. _____
3. _____
4. _____

Object 2



1. _____
2. _____
3. _____
4. _____

Object 3



1. _____
2. _____
3. _____
4. _____

Adapted from: *Lateral Thinking* by Edward de Bono, 1970.

Activity 2.3

Benchmarking the Classroom

Purpose

To raise a problem to the class, and to allow other students to provide a "better practice" example as a possible solution.

Directions

1. Think of a problem facing you or your department. List it below.

2. Exchange problems with other members of your group. If you can suggest detailed help with a problem, make arrangements to follow up after class.

3. With your group, discuss and list up to six benefits of benchmarking to you and your organization.

4. Be ready to share with the class your ideas about the benefits of benchmarking and suggestions to improve other students' ideas, particularly if you can suggest a "best practice" example (benchmarking).

Problem Area _____

Suggested Improvement(s): _____

_____

_____

_____

Benefits of Benchmarking: _____

_____

_____

_____

_____

ANNOTATED REFERENCE LIST

BOOKS

Albrecht, Karl G. *Brain Power: Learn to Improve Your Thinking Skills*. New York: Prentice-Hall, 1980.

This book is easy to read and contains delightful insights into the problems arising from our inability to think creatively. Dr. Albrecht breaks a complexity of subject areas into small, quickly read segments, all of which are filled with depth and illustration. The book defines how the brain works and gives practical approaches to logical thinking and mental flexibility. A companion video, "Brain Power," brings the book's principles to the screen.

de Bono, Edward. *Lateral Thinking*. London: Penguin Books, 1970.

This book, although not recent, still contains the best and earliest writing regarding our approaches to thinking. The book is written for teachers to use in the classroom. It is filled with examples and guidelines for stimulating the lateral thinking processes which are so needed for creative problem-solving.

Deming, W. Edwards. *The New Economics for Industry, Government, Education*. Cambridge, MA: Massachusetts Institute of Technology Center for Advanced Engineering Study, 1993.

This is the last book written by the father of the modern quality movement before his death. In it, Dr. Deming describes his system of profound knowledge and the importance that variation plays in production and service delivery. His fascinating demonstration of the "red beads exercise" is described as he explains the new approaches which management must take to be successful in both the public and private sectors, both now and in the future.

McNair, C.J., and Kathleen H.J. Leibfried. *Benchmarking: A Tool for Continuous Improvement*. Essex Junction, VT: Oliver Wight Publications, Inc., 1992.

This book is part of the Coopers and Lybrand Performance Solutions Series. It thoroughly explains the process of benchmarking, its origins, and the possibilities that are presented by its use. The text is filled with actual examples where benchmarking has, and is, being used successfully. The book has a chapter on implementing the benchmarking process as defined by its founder, Robert Camp.

PERIODICALS

American Society for Training and Development (ASTD). "Discovering and Developing Creativity." *Info-Line*, January 1989.

This issue provides an overview to the creative thinking process and contains a number of classroom exercises that can be used to stimulate creative thought. The issue contains an excellent up-to-date bibliography.

American Society for Training and Development (ASTD). "Understanding Benchmarking: The Search for Best Practice." *Info-Line*, July 1992.

This issue of *Info-Line* provides the reader with a concise overview of benchmarking and founder Robert Camp's five-step method of implementation. The issue contains an excellent up-to-date bibliography.

VIDEOS AND FILMS

"Idea Power." (15 minutes, with accompanying workbook.) Northbrook, IL: MTI Film & Video.

This video is based on the work of Karl Albrect in his book *Brain Power*. It is a humorous summary of some of the major principles in the book, providing a good visual companion to the subject matter.

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PERIODICALS

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VIDEOS AND FILMS

"Brain Power." (12 minutes, with accompanying workbook; based on the book by Karl G. Albrecht.) Northbrook, IL: MTI Film & Video.

MODULE 3: JUSTIFYING DECISIONS

TERMINAL OBJECTIVE

The students will be able to quantify problems and solutions, and use the information to justify a recommendation.

ENABLING OBJECTIVES

The students will:

1. *Explain the relationship among a department's mission, goal, impact objectives, and program objectives.*

2. *State problems in specific, quantifiable terms of their impact on service levels to the community.*

3. *Use a cost-benefit analysis to make a rational, fact-based justification for choosing among alternatives.*

4. *Describe the use of impact objectives in the evaluation function.*

NATIONAL STANDARD

The following sections of NFPA 1021 (1992) are addressed in whole or in part in this module: 4-4.1, 4-6.1, 4-10, 5-5.7, 5-6.3.

TRADITIONAL EVALUATION: ACTIVITIES

Historically, the fire service has not recognized the differences between activities and outputs. It has evaluated itself only on those things over which it had absolute control, such as the number of hours it trained, the number of fire inspections it performed, or the number of EMTs it certified.

Better Evaluation Criteria: Results

The fire service rarely looked at the results produced from those activities. Examples of results include the amount of fire loss that occurred, the number of heart attack victims saved, or the number of fires that occurred.

The key to making the right decisions, and being able to justify those decisions, is knowing what outcomes (results) are important. The best method for categorizing and managing the outputs is to use a system for formalizing and tracking the results.

The results are impact objectives. Impact objectives are crucial to the fire service, both to the firefighters and to the community. They help to focus on the outcome, not the activity, and to separate the means from the end.

Mission Statement

To understand impact objectives, we must see them as part of a larger system. This system starts with the mission statement, which describes the role of the department in the community and the specific functions or tasks it performs to achieve that mission. The mission statement defines the areas in which the department will formulate goals. The following example illustrates a typical mission statement.

> To protect the community through fire education, prevention, suppression, and investigation through the optimal use of resources.

Goals

Goals are the next link in the chain toward the impact objective. A department writes goal statements to define how it will accomplish the mission, and to establish the order of priority of effort.

Function of Goals

Goals must meet two critical conditions. They must define departmental priorities for planning and they must refer to the bottom-line results which have the greatest impact on the community.

Goal Benefits

A goal statement serves to set the priorities for planning, both long term within the framework of the master plan, and short term in reviewing the master plan each year to determine the tactical and operational priorities for the budgetary process. Departments do not have enough time, personnel, or money to address all the needs that exist in the community. Goals are priority statements to determine which areas the department will emphasize in the planning process.

Setting goals has the following three benefits:

- Establishing priorities for the department.
- Forcing the department to make clear, conscious choices about what is important.
- Focusing attention and resources on the critical areas of need, and avoiding diverting time and resources to less relevant issues.

Goals Limited to Three Verbs

Goal statements are primarily, but certainly not exclusively, limited to the use of three verbs:

- to reduce;
- to increase; and
- to maintain.

These terms clearly define the emphasis of the department in each goal area and reflect realistic appraisals, not only of the needs, but also of the resources available to meet these needs. Some areas of service will not need to be improved each year because the present level is appropriate for the community. Some areas will need to be improved because they are perceived as being an unacceptable level of risk in the community. Finally, some areas may need to be cut because of reduced budgets. Some examples of effective goal statements are

- to maintain adequate protection at acceptable cost;
- to increase survival rate from heart attacks;

- to reduce community risks related to hazardous materials;
- to reduce the dollar value of fire losses;
- to reduce total days of hospitalization for trauma injuries; and
- to reduce the staffing costs of suppression.

The key point in writing goals is to remember that **they must deal with results, not with the activities that produce those results.** Once goals are in place, it is possible to construct the impact objectives with which to measure their achievement.

Goals should describe results in impact areas. These will be defined in the next section on impact objectives.

Mission and Goals

Mission

To protect the community through fire education, prevention, suppression, and investigation through the optimal use of resources.

Goal

To reduce fire loss.

Fire Protection Objectives

Objectives are used to measure the results of the planning process. Objectives provide measurable levels of service and acceptable risk which determine the success or failure of the department to reach the results set forth in the planning process.

Two Types of Objectives

There are many different types of objectives, each with specific purposes in the planning process. The two types of objectives of greatest importance in management in general, and the planning process in particular, are

- impact objectives; and
- program objectives.

Three Critical Characteristics

All objectives share at least three characteristics. They must be

- describable;
- deadlineable; and
- measurable.

Describable means the objective is a clear statement of exactly what is to be achieved in terms that everyone in the organization can understand. They contain all the specific information necessary to understand the expectations expressed.

Deadlineable (time-specific) means that each objective must have a specific timeframe in which the objective will be accomplished, and specifically, a date by which the objective must be complete. The objectives should avoid ambiguous statements such as "next fiscal year," "within one year," or "one year from this date," and instead use a specific date such as "by June 30, 19--."

Measurable refers to a specific criteria for verifying if the objective has or has not been achieved. This usually refers to a numerical quantity, either in literal numbers, such as 100, 3,000, etc., or as a percentage improvement, such as 20 percent. But other, nonnumerical objectives, still are clearly measurable, such as "pass a smoke detector ordinance," or "establish an educational program."

Impact Objectives

Impact objectives flow directly from the goals a department formulates. They reflect the same concerns with the critical, high-profile measurements of the results that have the most meaningful impacts on the community; therefore the name impact objectives is used to describe them. They have the characteristics that define all objectives.

Impact Objective Definition

What sets them apart from other kinds of objectives is their focus on the bottom-line measurement of the primary impacts of the fire and EMS system on the community. Like goals, impact objectives concern themselves exclusively with results, not with the activities required to obtain the results. These results are the high-profile reasons for the existence of the department, the bottom line for the fire service. They are the criteria by which the community and public officials judge the department and the only meaningful measures of departmental effectiveness.

Objectives Written in Ten Impact Areas:

- deaths (fire and EMS);
- injuries (fire and EMS);
- number of fires;
- number of EMS calls;
- dollar amount of fire losses;
- dollar amount of injury/illness loss;
- dollar cost of providing services;
- level of fire risk in the community;
- level of injury risk in the community due to accidents or illness; and
- level of risk to critical economic or historical occupancies in the community.

Impact Objectives Do Two Things

They identify critical results on which to concentrate resources and effort and they quantify those results so they can be used to manage and evaluate progress.

Examples of Impact Objectives

- Reduce fire losses by 20 to 25 percent by June 30, 19--.

- Reduce deaths in residential occupancies by 40 to 50 percent by December 31, 19--.

- Provide required fire flow capacity to 90 to 95 percent of the commercial occupancies in the jurisdiction by June 30, 19--.

- Reduce fire suppression costs by 10 to 15 percent by June 30, 19--.

Departments Ignore Impact Objectives

In setting impact objectives, be as accurate and factual as possible. Base the numerical estimate in the objective on objective data. Use historical data when it is relative, or use data from prototype programs. Of course, you will need to use judgment and experience to make adjustments required for local conditions. Once developed, these measurable standards may be used to monitor progress continuously. This monitoring process leads the manager either to modify the activities and programs designed to achieve the objective or to modify the objectives that prove unrealistic.

Adjusting objectives is critical to maintaining their credibility as a control system. The process of setting objectives is incremental, cyclical, and continuous.

Many departments ignore impact objectives and skip right to program objectives. This occurs because all too many managers do not recognize the difference between impact and program objectives. They confuse activities with results, or they do not want to be held accountable.

Relationship Among Mission, Goals, and Impact Objectives

Mission

To protect the community through fire education, prevention, suppression, and investigation through the optimal use of resources.

Goal

To reduce fire loss.

Impact Objectives

To reduce fire loss by 8 to 12 percent by June 30, 1998.

To reduce fire loss in single-family residences by 7 to 10 percent by June 30, 1998.

To reduce fire loss in the three highest-loss occupancy classes by 10 to 15 percent by June 30, 1998.

To reduce fire loss in multifamily dwellings by 5 to 10 percent by December 31, 1998.

PROGRAM OBJECTIVES

Program objectives share the three critical qualities of all objectives but they deal with a radically different purpose. To meet impact objectives, a department develops various programs. **Program objectives are designed to measure the activities that achieve the impact objectives.** If the impact objective is "to reduce fire loss by 20 to 25 percent by June 30, 19--," a number of alternative programs might achieve that objective.

Among the possibilities is to institute increases in code regulations, increase inspections, increase educational programs, or build additional stations and staff them.

Managers must decide what level of these activities will be appropriate to reach the stated impact objective. A program objective is a clear statement of the activities that will yield the target results. Its first purpose is for budgeting the alternative and conducting a cost-benefit analysis. The second requirement is that the program objective is directly linked to a specific impact objective that it is designed to produce. Its third purpose, if that department adopts the particular alternative, is as the evaluation criterion for managing the program during and after implementation. It provides the performance standards for the maintenance and management of the program.

Proof of the Causal Relationship

Impact objectives measure the ten areas most important to the community and must be used to develop sensible program objectives. Proof of the cause-and-effect relationship between the activities (program objectives) and their results (impact objectives) is the link which traditionally has been missing in the fire service. However, it is essential for sound decisionmaking that can be justified to decisionmakers in the department and the community.

If impact objectives are used, the fire service manager will know which activities are working and which are not.

Some impact objectives may require only one program objective to achieve the desired results, while others will require a package of several programs, each with its own program objective, for achievement.

The key is to remember that program objectives cause the results to happen: they never address the results themselves.

Examples of Program Objectives

- Each company shall complete 100 inspections between July 1, 19--, and June 30, 19--.

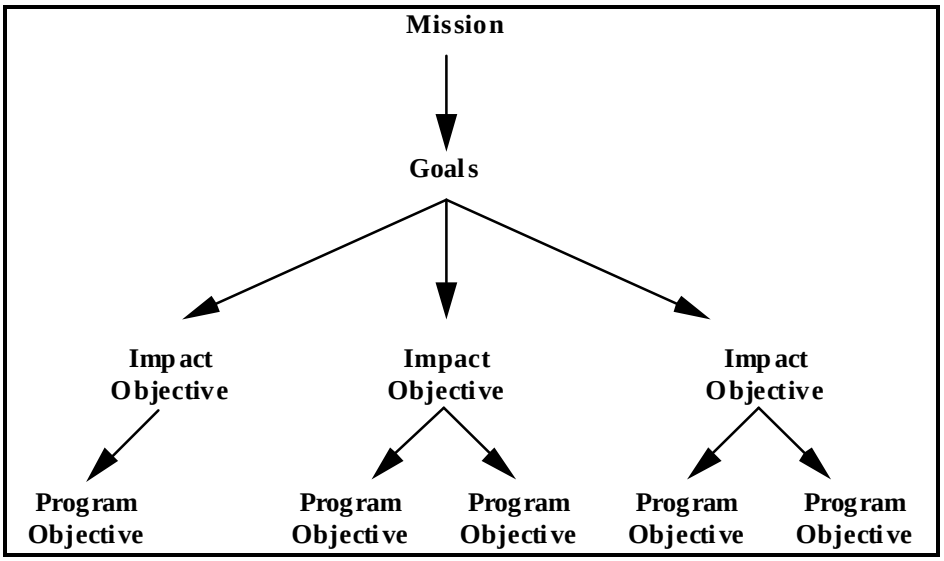
- Engine company personnel will inspect 90 to 95 percent of commercial occupancies by June 30, 19--.

- The fire inspector will inspect 95 to 100 percent of fire risk occupancies during each six-month period, beginning with the period 7/1 to 12/30/--.

- The fire inspector will inspect all hospitals and rest homes within each quarter, starting with 7/1 to 9/30/--.

- All sprinkler systems will be inspected and tested annually by a certified private agency, to be completed by June 30 each year, beginning in 19--.

- A home inspection program will be conducted for 20 to 30 percent of all residences by the public education division by June 30 of each year beginning in 19--.



Relationship Among Mission, Goals, and Impact and Program Objectives

Mission

To protect the community through fire education, prevention, suppression, and investigation through the optimal use of resources.

Goal

To reduce fire loss.

Impact Objectives

To reduce fire loss by 8 to 12 percent by June 30, 1998.

To reduce fire loss in single-family residences by 7 to 10 percent by June 30, 1998.

To reduce fire loss in the three highest-loss occupancy classes by 10 to 15 percent by June 30, 1998.

To reduce fire loss in multifamily dwellings by 5 to 10 percent by December 31, 1998.

Program Objectives

To install smoke detectors in 80 to 90 percent of all multifamily dwellings by June 30, 1998.

To increase inspections by 300 percent in 95 to 100 percent of all buildings in the three highest-loss occupancy classes by June 30, 1998.

INTEGRITY OF INFORMATION

Data Must be Accurate and Reliable

Data used for controlling operations must be accurate and reliable. Many departments have inaccurate records, since they place little emphasis on collecting accurate information. An example of the low regard for data can be found in the way most departments handle collecting information on fire losses. Fire losses are seldom verified through records of insurance claims paid, or estimated by professional insurance adjusters. Little comprehensive training is available for personnel who make fire cause determinations on nonarson investigations. Yet the results are made part of the official records and are accepted as accurate.

Departments seldom establish quality controls to verify data. Little systematic sampling is done on quantitative or qualitative issues. Quality control is a critical component in using performance measures as control factors.

Valuable data are available through the *National Fire Information Reporting System* (NFIRS) at the department, state, or federal level (through the U.S. Fire Administration).

EVALUATION AND EMPOWERMENT

Fire departments seldom do a good job of evaluating their activities. Evaluation is an essential function of management to use resources wisely. Impact objectives provide the natural benchmark for evaluation to judge the ultimate success. They provide the guidelines to manage the entire activity and to make the continuous, incremental adjustments necessary for success. Evaluation should be done throughout the implementation of a program, periodically (monthly, quarterly) measuring the progress towards the final impact objective. Shortfalls should be analyzed for cause and effect, and modifications should be made in activities to achieve the objective.

In some cases modifications should be made in the impact objective to adjust to new information or conditions. Impact objectives are a target and they are not always going to be attainable. To preserve their integrity and credibility, managers must modify the objective when changes in circumstances make the original projections impossible.

Effects of Impact Objectives on Personnel

Impact objectives are used to empower employees and hold them accountable. They shift evaluation from being supervisor- driven to being results-driven. Employees can measure their own progress and take steps to improve their efforts. They can make decisions and reasonable changes because they have objective criteria against which to evaluate their progress. The use of impact objectives encourages employees to be creative and innovative.

Reasons for Program Evaluation

Impact objectives reinforce the fiduciary duty of employees to the public to use resources effectively. They provide a foundation for decisionmaking and expand the base of knowledge in the profession by providing objective data about the relationship between the activities organizations engage in and the results those activities bring.

COST-BENEFIT ANALYSIS

Cost-benefit analysis is the primary tool for making a choice between alternatives, and justifying that choice to the political or economic decisionmakers. Cost-benefit analysis covers a wide range of specialized

analytical tools, which range from simple cost allocations to highly sophisticated, multilayered analytical techniques.

Purpose of Cost-Benefit Analysis

Cost-benefit analysis is the comparison of alternative proposals on the basis of the cost of a comparable measure of the benefits of each. All cost-benefit analyses involve identifying a common denominator by which to compare choices.

At its simplest level, cost-benefit analysis can compare alternative ways to produce the same activities. At its most complex level, it determines a way to link cost to results rather than to the activities. This provides a comparison of the cost efficiencies of alternatives based on the results those alternatives are projected to produce.

If historical data exist on program results, the comparison can be straightforward. But often cost-benefit analysis is performed on projected or forecasted results, and the forecasting process presents an additional challenge.

Start with the Impact Objective

To better understand the differences between cost-benefit analysis on activities and on results, return to the framework of the impact and program objectives.

Start with an impact objective: "Reduce the annual dollar fire losses by 15 percent for the period January to December, 19--."

Develop Alternative Program Objectives

Develop alternative programs to achieve the impact objective, and select one of these for the cost-benefit analysis.

For illustration we will use three alternative ways to reach this impact objective. These three program objectives are

- Perform 1,000 additional inspections of targeted occupancies by June 30, 19--.
- Deliver 100 educational programs to targeted audiences by June 30, 19--.

- Provide donated smoke detectors to 90 percent of residential occupancies that currently do not have them.

Prepare a Cost-Benefit Analysis

To illustrate the process of cost-benefit analysis we will select a program objective to use as an example: "Perform 1,000 additional inspections of targeted occupancies."

The cost-benefit analysis will be relatively simple because the end result is 1,000 inspections. The common denominator will be the cost per inspection. We will examine two possible ways of accomplishing the inspections:

Alternative 1: Pay overtime to current full-time inspectors to perform the inspections.

Alternative 2: Train station personnel to perform inspections and have them perform inspections during working hours.

A third alternative exists, which would be to hire a full-time inspector to perform the additional inspections. But for the sake of simplification, let us assume that the City/County Manager has frozen all new hiring, eliminating this alternative. Now we may perform a cost-benefit analysis on two alternatives to determine which would be most cost effective.

Step 1: Evaluate the cost of full-time inspectors working on overtime to perform each inspection.

Overtime Costs For Full-Time Inspectors

1. Calculate the total number of inspections which the inspectors can perform annually

Hours available per year for overtime inspections	400
Average hours required per inspection	2
Field inspector available for program	8

$$\frac{\text{400 hrs available annually}}{\text{2 hrs per inspection}} = \text{200 inspections annually per inspector}$$

Number of inspections that can be performed annually by all inspectors

8 inspectors x 200 inspections = 1,600 inspections

Note that the total hours available would provide 1,600 inspections. We will not need to pay for all the overtime we have available because we only need 1,000 inspections.

Calculate the **average** cost of each of the 1,000 inspection we do want to do.

2. Calculate the cost of performing each inspection (variable cost)

Overtime costs per hour	$36
Hours per inspection	X 2
Cost per inspection	**$72**

Step 2: Now, perform a cost-benefit analysis on using company personnel for inspections.

1. There are no direct inspection labor costs (variable costs) because they are already on duty.

2. The only costs involved are the training (fixed costs).

3. Calculate the number of inspections which can be done with available resources.

4. The total costs then are divided by the number of inspections to determine the cost per inspection.

Costs For Company-Level Inspections

1. Calculate fixed costs

One-time certification training	$2,400
Annual equipment costs	1,200
Annual support costs	1,200
Total fixed costs per person	$4,800

2. Calculate number of inspections that can be done

Hours available per year for field inspections	120
Average hours required per inspection	2
Field inspectors available for program	10

Number of inspections that can be performed annually

$$\frac{\text{120 hrs available annually}}{\text{2 hrs per inspection}} = \text{60 inspections annually per person}$$

3. Calculate the number of inspections that can be performed annually by all company inspectors

10 inspectors x 60 inspections = 600 inspections

4. Calculate the cost per inspection for a one-year period

$$\frac{\text{Total fixed costs per person } \$4{,}800}{\text{Annual inspections } 60} = \textbf{\$80 per inspection}$$

5. Calculate the cost per inspection for a two-year period

$$\frac{\text{Total fixed costs per person } \$7{,}200}{\text{Annual inspections } 120} = \textbf{\$60 per inspection}$$

This analysis allows a direct comparison of the incremental costs of programs. The programs can be compared despite the differences in fixed costs compared to variable overtime costs. The programs also can be compared under different conditions, such as spreading the fixed training costs over one year of inspections versus spreading the fixed costs over two years of inspections. Since fixed costs do not change with the number of inspections done, they will go down as a proportion of the cost of additional inspections performed. As we spread the cost over more inspections, the cost per inspection drops. This is important information as we determine whether we are willing to make a one- or two-year commitment of manpower to this program.

Step 3: Make a cost comparison of the results.

Cost Comparison Per Inspection	
Cost per inspection by full-time inspectors on overtime	$72
Cost per inspection by field inspector in one-year program	$80
Cost per inspection by field inspector in two-year program	$60

If the department is willing to commit to a two-year inspection program, it is more effective to use a field program. But if the department is willing only to commit to a one-year inspection program, it is more effective to use full-time inspectors working on overtime. The variation in program capabilities and limitations also are equalized to allow effective decisions. The maximum number of inspections available using field inspectors is 600.

Cost-Benefit Results

Under a two-year program it is cheaper to use

- field inspection program for 600 inspections; and
- overtime inspectors for 400 inspections.

If the department had a limited amount of money for a one-year period, and did not believe the program could be funded the next year, it is cheaper to use overtime inspections for all 1,000 inspections.

It is relatively easy to do cost-benefit analysis in this case because the benefits are the activities, which in this example are the inspections.

COST-BENEFIT ANALYSIS FOR IMPACT OBJECTIVES

The more difficult challenge comes when we do a cost-benefit analysis at the impact objective level. At this level the benefits are not a single activity (such as inspections), they are the results that flow from the activities. If our impact objective is "Reduce the annual dollar fire losses by 15 percent for the period January to December, 19--," we must evaluate all the potential programs that we believe will produce a 15-percent reduction. Examples of these alternatives will include fire inspections, fire education programs, mandated sprinkler systems, and reductions in response time by opening new stations.

The question is which of these programs will produce the desired 15-percent reduction in fire loss at the lowest cost. The common denominator is the cost for each dollar of fire loss reduction. The cost of the result (the reduced fire loss) must be calculated. This requires a much more sophisticated analysis.

First, there must be proof of a cause and effect relationship between the program and the reduction in fire loss. Second, there must be an estimation of the input-to-output ratio between the activity and the result. Only after we can predict that a specific level of activity will produce a reasonable range of results (reduced fire loss), is it possible to determine the cost of that reduction. Once we establish that linkage, it is possible to calculate each program's cost for each dollar of fire loss it will reduce. For example, how many dollars' worth of reduced fire loss will 1,000 inspections produce? How much fire loss will 500 inspections reduce? Unless we have a means for making reasonable forecasts of these results, it will be impossible to make a reliable cost-benefit analysis.

This forecasting process is by far the most difficult factor to calculate accurately in the cost-benefit analysis of program results, as compared to program activities. It requires the analysis of the historical results from previous programs in the department, from similar programs in other departments, or from other sources. The ultimate challenge is to determine the degree to which an activity accounts for a result. It is difficult to isolate the impact of any single activity on a result. Fire loss, for example, is obviously affected by many different factors. Since most fire departments have many programs operating simultaneously, it is difficult to determine which program is affecting fire loss, and to what degree.

Even if data exist it is important to realize that the relationship between activities and results is seldom constant. Most activities yield their best results early in the programs, and then diminish in impact as the volume increases. Programs have a point of diminishing return, where the number of results per input (for example, dollars of fire loss reduced for every inspection done) begins to decline. Determining the relationship of this curve is difficult, and presents the greatest challenge in calculating the cost-benefit ratio of most alternatives.

Assuming that we had sufficient data and evidence to support a reliable, sophisticated cost-benefit analysis, we could draw conclusions on the actual cost of alternative programs for reducing fire losses. The information below is hypothetical and used for purposes of illustration, but it shows how it would be possible to justify funding one program rather than another on a defensible, rational basis.

Cost Comparison of Competing Programs

Program	Cost per $1,000 of Loss Reduction
Inspection program	$90
Education program	$55
Smoke detector program	$48

- Predictions of results are far less reliable than predictions of activities we can control directly.

- There is a much higher degree of uncertainty in making these forecasts than in conducting a cost-benefit analysis of activities.

SUMMARY

Traditionally the fire service has evaluated itself on its activities rather than on the results of those activities. However, the key to making the right decisions and being able to justify them is knowing what results are expected by our customers, the citizens.

Impact objectives are the quantitative measures that have the most impact on the community. They identify the critical results on which to concentrate and quantify results to make people accountable. Program objectives detail the number of activities to achieve the impact objectives. Performing a cost-benefit analysis can help you choose among alternatives and justify the decision to your supervisors and to the community.

Activity 3.1

Writing Impact Objectives

Purpose

To write clear and accurate impact objectives.

Directions

1. Form groups as assigned by your instructor.

2. Write three different impact objectives that represent a typical range of services provided by the departments represented in each group. Ask the instructor to check your group's first objective to determine if it is correct.

3. Refer to the list of impact areas in your Student Manual (page SM 3-7). The impact objectives must be quantifiable statements about one of these ten specific areas. Also review the three criteria--described, deadlined, and measured--to make sure your impact objectives meet them.

4. Use 15 minutes to develop the impact objectives and record them on a flipchart. Select a spokesperson to present the impact objectives to the class.

Activity 3.2

Writing Program Objectives

Purpose

To write program objectives based on the impact objectives previously developed by the group.

Directions

1. Form your groups and go to breakout rooms.

2. Review the impact objectives previously developed and write two program objectives to support each of the three impact objectives your group has written.

3. Make sure that the program objectives will lead to achievement of the specific impact objective that they support and that they conform to the criteria (described, deadlined, and measured). Ask your instructor to review the first program objective to make sure it is right.

4. Appoint a spokesperson to present the objectives to the class and to discuss your answers to the following questions:

    a. How many departments in your group actually focus on the ten areas of impact objectives as a measure of departmental effectiveness? Is this the best way to manage the department?

    b. How many departments in your group focus on the areas of program objectives as a measure of departmental effectiveness? Is this the best way to manage the department?

    c. How many departments in your group manage without measuring specific accomplishments in either area? Is this the best way to manage the department?

    d. How many in your group feel that their departments would benefit from integrating a focus on impact objectives into their operational management?

Activity 3.3

Selecting Data to Support Decisions in the Fire Service

Purpose

To identify a typical fire-service decision or recommendation and select data to support it.

Directions

1. Form groups as assigned by the instructor.

2. Work collectively for 15 minutes to select one of your impact objectives developed in this unit. Then decide the following:

   a. What factual data would be required to support decisions on that impact objective?

   b. What quantitative method should be used to compare alternative solutions to meeting the objective?

   c. What criteria should be used to make the decision?

   d. What justification strategy will be most appropriate?

3. Select a spokesperson, different from the ones in Activities 3.1 and 3.2, to present your group's answers to the class.

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An excellent followup to *How to Measure Managerial Performance,* it is a briefer and less systematic book, but it is filled with outstanding insights into performance-based management.

MODULE 4: MANAGING CHANGE IN THE FIRE SERVICE ENVIRONMENT

TERMINAL OBJECTIVE

The students will be able to explain why people resist change and develop strategies for implementing change within the fire service environment.

ENABLING OBJECTIVES

The students will:

1. *Discuss the concept of resistance to change for both people and organizations.*
2. *Describe strategies used for implementing change in the fire service environment.*
3. *Describe the importance of the manager serving as an agent for change within the organization.*
4. *Describe the steps to be used for monitoring changes and evaluating their results.*

NATIONAL STANDARDS

The following sections of NFPA 1021 (1992) are addressed in whole or in part in this module: 2-4.3, 3-2.1, 3-2.2.

INTRODUCTION

"There is nothing more difficult to take in hand, more perilous to conduct, more uncertain in its success, than to take the lead in the introduction of a new order of things."

Machiavelli, 1537

A mind is like a parachute; it has to be open in order to work properly.

Change Defined

Change can be defined as making something different; to modify, to make distinctly different from what was. Sometimes change is welcomed by the persons affected; sometimes it is resented and resisted.

Conditions Creating the Need for Change

Organizations and the people within them are having to change and transform themselves because they are facing the effects of a changing economic structure and new technology being developed at an ever increasing rate. Our changing national economic structure has spanned reduced budgets, cost-cutting propositions such as 13 and 2-1/2, downsizing/rightsizing, and a host of other budget-cutting measures. New technologies such as computerization, enhanced 911, positive pressure ventilation (PPV), Class "A" foam, improved protective clothing and breathing apparatus, and PASS devices all require additional funding and training time for proper application and use.

Increasing demands by more knowledgeable "customers" also are forcing change, as are increasing federal, state, and local mandates. Examples of new demands by citizens/customers include changes in the form of government, term limitations, direct involvement in community decisions, and increased input through media and special interest groups. Government mandates such as the Superfund Amendments and Reauthorization Act (SARA Title III), Fair Labor Standards Act (FLSA), Americans with Disabilities Act (ADA), Occupational Safety and Health Administration (OSHA), and Environmental Protection Agency (EPA) requirements, changing NFPA standards, etc., all combine to drain additional dollars from shrinking public coffers, while requiring us to change the way we do business.

Competition and privatization within the fire service as well as in private industry also are helping to drive the wheels of change. Examples of competition and privatization include private fire and EMS services, combining of fire departments through consolidation, regionalization of

haz mat and/or EMS services, and volunteer departments changing from all volunteer to partly (or fully) paid.

Persons or organizations that fail to grow and change in order to keep pace with the times eventually will stagnate and atrophy. Stagnation, as opposed to forward motion, has much the same effect on organizations as on people. In either case, its effects can spell the end for an organization, be it a fire department or private-sector business.

Changes in the Fire Service Environment

The fire service as we know it today is immensely different from that of 20 years ago. Consider the following changes that have occurred in the fire service over the past 20 years. Many of our brothers and sisters in the fire service today were working and volunteering on the job before **any** of the changes noted below were implemented.

CHANGES IN THE FIRE SERVICE OVER THE PAST 20 YEARS

List as many innovations and changes as you can think of that have occurred in the fire service over the past 20 years. Add to your list as the class discussion and brainstorming continues.

Change and the "Comfort Zone"

As previously noted, sometimes change is welcomed by those affected; sometimes it is resented and resisted. Change is resisted when people feel their "comfort zones" are being invaded. Comfort zones are defined by our habits: those ways that are customary and comfortable to us. No change in an individual or organization will truly be permanent until that change becomes the preferred way to behave.

OVERCOMING RESISTANCE TO CHANGE

"Few organizations can be characterized as having a high level of trust between employees and management, and consequently it is easy for misunderstandings to develop when change is introduced."

Kotter and Schlesinger, 1983

Responding to Change

People resist change for one of four reasons: a desire not to lose something of value; misunderstanding the change and its implications; belief that change will not improve the organization; or having a low personal tolerance for change.

Research indicates that when change is implemented, some people are willing to accept the change right away. Others change to avoid getting into trouble, but do not believe in the change and criticize the program. Another group of people say they will change, but never actually accept the change, and a final group of people (usually the smallest grouping) openly oppose the change and refuse to accept change regardless of its purpose.

Barriers to Successful Implementation of Change

As a mid-level manager charged with the implementation of change, you may have to confront some of the following barriers:

- Lack of vision: When the organization's vision or strategies are unclear, employees may be unsure how changes are to be implemented. Clear plans must be made to ensure that information passed down does not become filtered, diffused, and nonspecific.

- History of poor implementation: In an organization with a poor history of implementing changes, members are not going to expect much when new changes are announced. Some organizations make great fanfare of rewarding people involved in big projects, but fail to follow through and finish the project or make sure that the desired goals were achieved.

- Lack of middle-management support: If you (the middle managers) do not believe in and support the change, it probably won't be successful. To avoid this, make sure you are involved in the process "up front."

- Lack of understanding: Managers must understand and believe in the change if they expect to be successful in its implementation. Know the difference between lack of understanding and lack of belief.

- An environment of low risk-taking: A tendency to overpunish errors or reward simply the absence of errors promotes mediocrity and low risk-taking.

- No-consequence management: People will ignore new directives if there are no rewards for compliance and no negative consequences for failure to comply.

- Lack of planning for resistance: All major changes involve resistance; people resist the disruptions that changes cause more than the changes themselves. Don't deny or try to quash resistance. If resistance is not managed properly it goes "underground" and produces slowdowns, covert resistance, malicious compliance, and even sabotage.

- Lack of time: Insufficient time for implementation will cause large maintenance costs after the change is implemented.

- Lack of union support: Some organizations fail to solicit union input and support for changes. This can lead to distrust and in-fighting between labor and management.

- Lack of synergy: Synergy is the ability to work together for combined actions or operations. Forgetting that an organization's various operations are interdependent can lead to initiating changes successfully in one place and encountering resistance in another place.

- Rhetoric unsupported by results: Senior managers say one thing, but their behavior suggests the opposite.

DEVELOPING STRATEGIES TO MANAGE CHANGE

The most important tool available to you in having change accepted within an organization is the level of **trust** established between employees and the administration. To build employee confidence when implementing change, you should consider using one or more of four strategies:

1. **Identify who will be most affected by the change and involve them in the decision process**: Employee involvement builds commitment both for the desired change and for the organization. Involvement has the added effect of increasing both employee motivation and the chances for overall acceptance of the desired change.

2. **Work to build trust between employees and administration**: Trust is the basis of human relationships. Trust does not come naturally; people must want it and work for it. Because trust is complex, it cannot be built in a short period of time and have lasting value. As trust develops, diverse skills and abilities become recognized and appreciated as strengths. People become more frank, expressive, responsive, and spontaneous.

3. **Empower employees to increase productivity and "buy in"**: Employee empowerment means encouraging an employee's commitment to doing the best job he or she can by enabling him or her to "own" the goals and objectives of the organization. Empowerment encourages employee commitment, risk-taking, and innovation. The concepts of empowerment are covered fully in the course, *Managing in a Changing Environment*.

4. **Hold employees accountable for their work product**: Fire service managers often are held to a high degree of accountability for the resources entrusted to their care. With accountability should come both the responsibility and authority to ensure that the resources are used efficiently and effectively. When accountability is combined with empowerment, the results can pay major benefits for the organization in the areas of innovation, improvement, and employee trust.

THE MANAGER AS CHANGE AGENT

"The difference between a successful change or innovation and an unsuccessful one often lies in the capabilities of management personnel within a particular fire department."

Joseph N. Baker
Managing Fire Services

Both the chief fire executive and the mid-level manager are responsible for motivating the organization to accept the desired change. Top management is responsible for influencing change by providing an environment in which mid-level managers can achieve greater influence, while becoming key implementers and communicators of the desired change.

In turn, middle managers are responsible for increasing opportunities for nonmanagement employees to participate in the change process. The middle manager should advise his/her employees of the details of the change and discuss the reasons for the change and its benefits. The middle manager also should discuss any expected changes in existing work patterns as well as advantages to be gained throughout the department from the change.

MONITORING AND EVALUATING CHANGE

An integral part in implementing change is evaluating the results. Proper reporting and evaluating procedures should be established to ensure that the intended results of the change are achieved.

Proper monitoring and evaluating requires the collection of good data. For example, objective data are capable of being measured, while subjective data are (by definition) based more upon the personal opinion of the evaluator. In a similar fashion, qualitative data relate to the specific type or kind of data, while quantitative data are measured in numbers.

When evaluating change, mid-level managers should understand that most people go through four predictable stages in response to change. Understanding the transition process will help managers evaluate and accomplish change (e.g., closing a fire station, layoffs, new employees, or a new fire chief). The four stages and tips for monitoring each stage are discussed below.

Four Stages of Transition to Change

- **Stage 1: Shock**: People view changes as threats. Productivity is low; people cannot rationalize the change and have trouble focusing on possible improvements. Monitoring and evaluating at this stage should involve helping employees look for common ground. Give employees regular information and visible support. Provide safety nets through clear statements of work expectations, rewards, and supports.

- **Stage 2: Retreat**: People defend their old ways and back away. There is a lot of anger or anxiety and refusal to let go of the past. When monitoring change, look to help employees identify exactly what it is that they're "holding on" to and how they can maintain comfort and predictability in the new situation. Identify areas of stability; things that are not changing. Encourage a risk-taking environment with rewards, and provide support, resources, and clear expectations.

- **Stage 3: Acknowledgment**: There is a sense of grief and sadness over the loss. People begin to let go as they see the value of what is coming, and look for ways to make the changes work. You can manage this stage by involving people in the planning and decisionmaking process. You also can encourage risk taking by pointing out ways in which the organization will provide support, and emphasize that everyone is learning from the process.

- **Stage 4: Adaptation and change**: People are ready to establish new routines and to help others succeed. Risk taking relative to changing work methods, products, or adaptations is fully utilized. In this stage the plan is actually fully implemented. When monitoring and evaluating, ensure that information travels in all directions: upward, downward, and horizontally. If necessary, make corrections in the new change as required and communicate them accordingly.

SUMMARY

This module has focused on having the students gain an understanding of the inherent resistance of people to change, and on developing strategies for implementing change within the fire service environment.

By gaining an understanding of how people react to change and the barriers to implementing change, the fire service manager can develop effective strategies for implementing change.

Gaining employee confidence and trust are the keys to the successful management of change. The fire service mid-level manager plays a major role in the introduction, communication, and management of change. Proper monitoring and evaluating techniques are crucial to the successful implementation of change.

Activity 4.1

Identifying Future Changes

Purpose

To identify the most important changes facing fire departments today and the impacts of those changes.

Directions

1. The class will be divided into small groups.

2. Using the Activity Worksheet on the next page, your group should take 5 minutes to list changes that most departments will be facing over the next one or two years. Then define the specific impacts for changes that cause an increase, decrease, or maintenance in something, e.g., activities.

3. Then reach consensus on a list of three changes that most or all departments represented will be facing.

4. Select a spokesperson to present this "future change" list and expected impacts to the rest of the class during a brief open discussion.

Activity 4.1 (cont'd)

Worksheet

	Changes	Expected Impacts
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		
11.		
12.		
13.		
14.		
15.		
16.		
17.		
18.		
19.		
20.		
21.		

Activity 4.2, Part 1

Trust-Orientation Profile

Purpose

To gauge your propensity for trust in relationships. Principles of trust-building and related attitudes hold true in relationships between two people as well as among members of a group.

Directions

1. Read the directions for completing the Trust-Orientation Profile instrument.

2. After you have read the directions, complete the instrument individually.

Activity 4.2, Part 1 (cont'd)

Trust-Orientation Profile

Myron R. Chartier

Directions: For each of the situations described below, you are to distribute five points between two alternatives (A and B). Base your answers on how you actually behave or feel or how you actually perceive the situation, not on how you think you should respond. Although some sets of alternatives might seem to be equally true, assign more points to the alternative that is more representative of your personal experience. For the purpose of this activity, "co-worker" is defined as peers and/or subordinates who work in close proximity with you on a regular basis.

1. If A is completely characteristic of you or your views and B is completely uncharacteristic, write 5 under A and 0 under B.

2. If A is considerably characteristic of you and B is somewhat characteristic, write 4 under A and 1 under B.

3. If A is only slightly more characteristic of you than B, write 3 under A and 2 under B.

4. Each of the above three combinations may be reversed. If you feel B is slightly more characteristic of you than A, write 2 under A and 3 under B, and so on for A=1 and B=4, or A=0 and B=5.

Be sure the numbers you assign to each pair add up to 5.

1. _____(A) My co-workers have all the knowledge and experience they need to do their job effectively.

   _____(B) My co-workers seem to lack the knowledge and/or experience they need to do their jobs effectively.

2. _____(A) I cannot predict how my co-workers will respond in a given situation.

   _____(B) I can predict how my co-workers will respond in a given situation.

3. _____(A) I share my honest thoughts and feelings with my co-workers.

   _____(B)I keep my honest thoughts and feelings to myself.

4. _____(A) I help my co-workers see what their goals and concerns should be.

   _____(B) I let my co-workers know that I understand and appreciate their individual goals and concerns.

5. _____(A) I trust my co-workers; I believe they won't let me down.

   _____(B) I "play it safe" and trust only myself; this way no one else can let me down.

6. _____(A) I am not convinced that each of my co-workers is worthy of my respect.

   _____(B) I respect my co-workers; each of them has a unique contribution to make.

7. _____(A) I encourage my co-workers to comment on their thoughts and feelings.

   _____(B) I would prefer not to hear my co-workers' expressions of their thoughts and feelings.

8. _____(A) I believe in the old saying "do as I say, not as I do."

   _____(B) I say what I mean and mean what I say.

9. _____(A) When I am in a bind, I know I can depend on my co-workers to help me out.

   _____(B) When I am in a bind, I have to rely exclusively on myself.

10. _____(A) My abilities are superior to those of my co-workers.

    _____(B) My co-workers and I are all at the same level of competence.

11. _____(A)I let myself be vulnerable with my co-workers.

    _____(B) I protect myself and try not to be vulnerable with my co-workers.

12. _____(A) The term "commitment" doesn't seem to mean much to my co-workers.

    _____(B) I can depend on my co-workers to follow through on their commitments.

13. _____(A) My co-workers and I cooperate with one another.

    _____(B) My co-workers and I compete with one another.

14. _____(A) My co-workers behave as if they think they are better than I am.

    _____(B) My co-workers treat me as an equal.

15. _____(A) I can count on my co-workers to meet the deadlines and performance standards defined for their work.

    _____(B) I cannot count on my co-workers to meet their deadlines and performance standards.

16. _____(A) When faced with a problem, I figure out the best solution and present my idea to my co-workers.

    _____(B) When faced with a problem, I collaborate with my co-workers to define the problem, explore alternatives, and arrive at a solution.

17. _____(A) My team is warm, accepting, and free of hostility.

    _____(B) There is hostility in my team.

18. _____(A) I cannot rely on my co-workers.

    _____(B) I can rely on my co-workers.

19. _____(A) My co-workers and I are knowledgeable and experienced in our respective skill areas and in our ability to interact with one another.

_____(B) My co-workers and I lack the knowledge and experience to function as effectively as we might.

20. _____(A) I wonder if my co-workers appreciate my work; I sometimes think they question the value of my contributions.

_____(B) I know that my co-workers are concerned about my well-being; they "play fairly" and respect my unique contributions.

21. _____(A) My co-workers hold themselves accountable for their work.

_____(B) My co-workers do not hold themselves accountable for their work.

22. _____(A) I prefer my own solutions to problems.

_____(B) I am willing to accept solutions proposed by my co-workers.

23. _____(A) No matter what I share with my team members, they are not judgmental.

_____(B) I am careful about what I share with my team members because they may judge me harshly.

24. _____(A) I assume that my co-workers could use my help in doing their jobs.

_____(B) I assume that my co-workers are capable of doing their jobs.

STOP

Go no further until your instructor tells you.

Activity 4.2, Part 2

Trust-Orientation Profile

Purpose

To gauge your propensity for trust in relationships. Principles of trust-building and related attitudes hold true in relationships between two people as well as among members of a group.

Directions

1. Following completion of the instrument, transfer your score to the Trust-Orientation Profile Scoring Sheet.

2. After completing the Scoring Sheet, total the scores in each column, determine your trust orientation (by subtracting your total mistrust score from your total trust score), and plot your respective scores on the scale provided on the Trust-Orientation Profile Interpretation Sheet.

3. After completing the activity, review the descriptions noted in the Student Manual that contrast the characteristics that build trust with those that build mistrust.

Activity 4.2, Part 2 (cont'd)

Trust-Orientation Profile Scoring Sheet

Characteristic	Trust	Mistrust
Expert versus Inept	1A_____	1B_____
Dependable versus Capricious	2B_____	2A_____
Open versus Closed	3A_____	3B_____
Supportive versus Controlling	4B_____	4A_____
Willing to risk versus Unwilling to risk	5A_____	5B_____
Respectful versus Disrespectful	6B_____	6A_____
Open versus Closed	7A_____	7B_____
Genuine versus Hypocritical	8B_____	8A_____
Cooperative versus Competitive	9A_____	9B_____
Mutual versus Superior	10B_____	10A_____
Willing to risk versus Unwilling to risk	11A_____	11B_____
Genuine versus Hypocritical	12B_____	12A_____
Cooperative versus Competitive	13A_____	13B_____
Mutual versus Superior	14B_____	14A_____
Accountable versus Unaccountable	15A_____	15B_____
Open minded about problems versus Fixated on predetermined solutions	16B_____	16A_____
Accepting and warm versus Rejecting and cold	17A_____	17B_____
Dependable versus Capricious	18B_____	18A_____
Expert versus Inept	19A_____	19B_____
Respectful versus Disrespectful	20B_____	20A_____
Accountable versus Unaccountable	21A_____	21B_____
Open minded about problems versus Fixated on predetermined solutions	22B_____	22A_____
Accepting and warm versus Rejecting and cold	23A_____	23B_____
Supportive versus Controlling	24B_____	24A_____
Totals		

Activity 4.2, Part 2 (cont'd)

Trust-Orientation Profile Interpretation Sheet

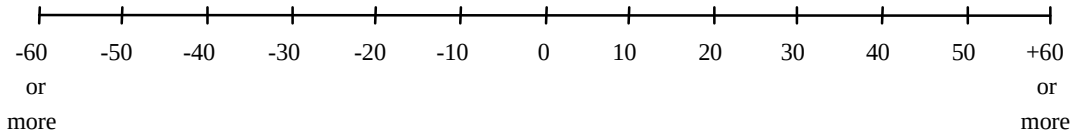
Directions: Transfer your scores from the scoring sheet to the lines that follow in order to compute your trust-orientation score.

Total Trust Score _____

Total Mistrust Score - _____
(Subtract from above.)

Trust Orientation ☐

Plot your trust-orientation score on the continuum that follows.



MISTRUST TRUST

Activity 4.2, Part 2 (cont'd)

Trust-Orientation Profile Theory Sheet

The following descriptions contrast the characteristics that build trust to those that build mistrust. Read this interpretation sheet in the context of your personal trust and mistrust scores. You may want to pay particular attention to mistrust items to which you assigned four or five points.

Expert Versus Inept

People trust others who are knowledgeable and experienced in the area in which trust is to be granted (Giffin & Barnes, 1976). People do not trust those who have little or no knowledge in a given area. There is a high trust level in relationships in which people possess and exercise what Giffin and Barnes (1976) label "relevant wisdom." When people are inept with respect to the substantive knowledge, interpersonal qualities, skills, and abilities needed to work collaboratively, they often blame others for their ineffectiveness. When people lack expert technical and relational competencies, the results are poor communication dynamics and a hostile, defensive environment. Such an untrustworthy climate undercuts effective interpersonal relationships.

Dependable Versus Capricious

Probably the most critical characteristic in the creation of trust is dependability. Human beings will trust others more easily and more deeply if they believe they can rely on them. A person's trust will be more widespread if he or she can predict how others will respond, whether the situation is simple or complex. Capricious people cannot be relied on; their behavior is often quite unpredictable, which can lead to deep mistrust. Being dependable is crucial to building trust.

Open Versus Closed

Open people share their innermost thoughts and feelings with others and are receptive to data, ideas, perceptions, and feelings. Closed people keep their thoughts and feelings to themselves and project an attitude of being nonreceptive to others' communications. Every person has a right not to share certain thoughts and aspects of his or her life. However, effective interpersonal relationships are impossible when information is deliberately kept from others or is ignored. Shared information contributes to trust between people. In order to create a climate of mutual trust, people must be appropriately open with one another.

Supportive Versus Controlling

The supportive person seeks to be encouraging; reassuring; and understanding of others, their agendas, and their goals. The controlling person tries to bind others to his or her desires and wishes, operating on the assumption that others are inadequate and need to be dominated by someone who "has it together." Supportiveness creates a climate of trust, whereas control engenders a climate of resistance and defensiveness. It is easy to trust supportive persons. A supportive attitude among people contributes to a trustworthy climate in which effective interpersonal relationships are possible.

Willing to Risk Versus Unwilling to Risk

To trust another person is risky; a decision to trust can lead to either good or bad consequences. To entrust one's well-being to another person makes a person vulnerable. Risking is the process of deciding to accept potentially adverse results that may come from trusting another. The greater the risk involved, the more one is required to trust another. Taking such risks with others creates a trusting climate because it communicates trust. Playing it safe communicates one's unwillingness to trust and fails to generate trust among people.

Respectful Versus Disrespectful

Situations in which people are convinced that others respect them for who they are and for what they have to contribute are conducive to trust. Knowing that others are concerned about one's well-being goes a long way in helping a person to believe that the risk of trust is worthwhile. In situations in which verbal or even physical abuse takes place, fear overwhelms the bonds of trust and impedes effective interpersonal relationships. Respectful people look out for one another's welfare and thereby create a climate of trust.

Genuine Versus Hypocritical

A genuine person is a person of integrity. The genuine person's thoughts, feelings, and actions are consistent. It is difficult to trust someone whose words and conduct are inconsistent. If one can never be certain about the meaning of another's words, true intentions, or actions, he or she experiences the other person as hypocritical. Genuine people are honest. Trusting them comes easily because they say what they mean; they clarify their intentions; and they follow through on their promises. Interpersonal relationships are enhanced when people are genuine.

Cooperative Versus Competitive

A cooperative attitude builds trust; when people experience a spirit of cooperation, they share relevant information openly, clearly, and honestly. In a competitive atmosphere, communication is either lacking or misleading. Whereas cooperation requires teamwork to achieve common goals, competition stresses personal objectives at the expense of common objectives. When a competitive spirit pervades the climate, trust may be difficult to achieve; fear and defensiveness are the likely result. On the other hand, the give-and-take of cooperation builds a fellowship and trust among people.

Mutual Versus Superior

When people communicate that they feel superior to others, a climate conducive to mistrust and defensiveness is ensured. When people sense a spirit of mutuality, an environment conducive to openness and trustworthiness results. Mutuality makes it possible for people to resolve issues through problem-solving. There is a desire for two-way communication, power is shared, role status is minimized, and appreciation of individuals is maximized. Each person's self-worth is valued. A spirit of mutuality generates a trustworthy climate in which each person's abilities and interests are valued and nurtured.

Accountable Versus Unaccountable

Trust is enhanced when people are willing to be accountable to one another. Eventually, any interpersonal relationship is based on the assumption of personal responsibilities and accountability. Without accountability, all efforts become random, haphazard, even chaotic. This result leads to an undependable climate in which people do not know whether or not they can count on others to do what they have said they would do. Accountable relationships create and maintain a trustworthy climate.

Problem Centered Versus Solution Minded

People with a problem-centered attitude work collaboratively to define problems, explore alternatives, and arrive at solutions. They have no preplanned solutions and encourage others to set goals, make decisions, and evaluate progress in light of the nature of the problem and the various alternatives open to them. Solution-minded people assume that recognizing a problem is equivalent to understanding it. They are quick to arrive at solutions and fail to explore the nature of the problem. They often have a strong tendency to impose their answers on others. Adopting an immediate-solution approach tends to generate negative feelings, a divisive climate, and an atmosphere of endless argumentation and fruitless debate.

Accepting and Warm Versus Rejecting and Cold

An accepting, warm attitude is a major contributor to trust building. On the other hand, a rejecting, cold attitude creates feelings of rejection, low self-esteem, and hostility, which lead to mistrust and suspicion. Accepting attitudes lead to feelings of psychological safety, which lead people to believe that no matter what they share, others will respond in an accepting, nonjudgmental manner. Warmth in relationships is essential to creating a trustworthy climate for effective teamwork. When an attitude of warmth is communicated, people feel prized for who they are and what they have to contribute.

Conclusion

The preceding principles of trust-building and mistrust-building attitudes hold true in relationships between two people as well as among members of a group. If you decide to foster more trust-building attitudes, you can take certain actions. The following interpersonal behaviors can help to build trust:

- initiating communication or action with others;
- establishing eye contact;
- communicating clearly;
- giving and receiving feedback;
- listening empathically;
- expressing personal feelings;
- accepting the feelings of others;
- using "I" messages;
- affirming the self-images of others;
- being present and involved;
- acting consistently; and
- appreciating the trust of others.

Activity 4.3

Managing Change

Purpose

To use all of the "tools" you have gained from the material in practice on assigned scenarios.

Directions

1. The class will be divided into two large groups.

2. Read your assigned scenario(s) and then complete the Worksheet individually.

3. After completing the Worksheet, work in your assigned group and attempt to reach consensus on items II, III, and IV of the Worksheet.

4. Select one member of your group to take notes during group discussion, and another member to present the findings of your group to the rest of the class.

Activity 4.3 (cont'd)

Scenario 1

You are the new fire chief of Westport, a growing suburban community with light industry and a mixture of old and new dwellings. You have been hired by the Fire and Police Commission. You come from a city in another state where you established an outstanding record as a modern and innovative deputy chief. Your previous chief and city manager wrote glowing recommendation letters praising your past record of accomplishments. You have 20 years of fire command experience. You have provided innovations in rescue operations, prefire planning, and fireground tactical operations which included the design of new suppression equipment. You also helped the city council rewrite the city fire code. You have long been regarded by your peers as an example of a modern fire officer.

While Westport is a growing and forward-thinking city, its fire service has remained in the dark ages, primarily because of the lackadaisical leadership of the previous chief who finally retired. The old chief let the department deteriorate for the past ten years. He/She failed to purchase needed new equipment. He/She had no training procedures beyond basic hose and ladders for training his/her force in fireground tactics. He/She was suspicious of any firefighter who sought a college education. Accordingly, there is a tremendous morale problem in the department. The old firefighters have made a career out of stomping out new ideas. However, there are a few good young officers who could provide some leadership and energy to modernize the department.

Your task (as a group) is to create a change management plan for developing a supervisory-level training program for the fire department. Consider all levels, including entry, in-service, midmanagement, and administrative. In 20 minutes be prepared to summarize your problem, recommend a solution, and give your reasoning.

I. Which of the following "barriers to change" appear to be present in your assigned scenario? Check appropriate choices.

- ❑ lack of vision
- ❑ history of poor implementation
- ❑ lack of support from middle management
- ❑ lack of understanding
- ❑ low risk-taking environment
- ❑ no-consequence management
- ❑ lack of clear communication
- ❑ lack of planning for resistance
- ❑ poor management of resistance
- ❑ lack of time
- ❑ poor followthrough
- ❑ lack of union support
- ❑ lack of synergy
- ❑ rhetoric unsupported by results

II. Considering the above-noted barriers, which of the following change strategies would be most appropriate to employ for your assigned scenario? Check all that apply and make notes as appropriate.

- ❑ Work to build trust between employees and administration. _____

_____

- ❑ Identify who will be most affected by the change and involve them in the decision process. _____

_____

- ❑ Empower employees to increase productivity and "buy in." _____

_____

- ❑ Hold employees accountable for their work product. _____

_____

III. Consider the four stages of response (as noted below) that most people go through when faced with impending change. In the spaces provided, check one or two indicators for each stage and note tools to use to help manage the change process at each stage.

1. Stage 1: Shock.

   a. Indicators:

      ❑ People view change as a threat.
      ❑ Low productivity; people cannot rationalize change.

   b. Management tools:

      ❑ Help employees look for common ground.
      ❑ Give regular information and visible support.
      ❑ Provide clear statements of work expectations.
      ❑ Treat for psychological shock (time and emotional support).

2. Stage 2: Retreat.

   a. Indicators:

      ❑ People defend their old ways.
      ❑ There is anger, anxiety, and refusal to let go of the past.

   b. Management tools:

      ❑ Help employees to identify comfort zones.
      ❑ Identify areas of stability; what's not changing.
      ❑ Encourage risk taking with rewards, resources, and support.

3. Stage 3: Acknowledgment.

   a. Indicators:

      ❑ A sense of grief and a sadness over the loss.
      ❑ People begin to let go as they see the value of what is coming.

b. Management tools:

- ❑ Involve people in the planning and decisionmaking process.
- ❑ Encourage risk taking through showing organizational support.
- ❑ Emphasize that everyone is learning from the process.

4. Stage 4: Adaptation and change.

a. Indicators:

- ❑ People are ready to establish new routines and help each other succeed.
- ❑ Risk taking relative to changing work patterns is fully used.

b. Management tools:

- ❑ Implement the plan.
- ❑ Encourage and support risk taking.
- ❑ Ensure proper monitoring so information travels in all directions.
- ❑ Make corrections as needed and communicate them accordingly.

IV. Briefly describe the monitoring and evaluating process that you would establish to ensure that the desired results of the change were being achieved.

Activity 4.3 (cont'd)

Scenario 2

The decision to purchase a positive-pressure ventilation gas-powered fan and implement PPV was made shortly after Chief Barnes of the Barnestown Volunteer Fire Department returned from a seminar on PPV use on the fireground. The Chief planned to use money that had been earmarked for the annual department picnic and party for the purchase. In the past, the annual picnic and party was the major social event of the year for members of the department; almost all attended, along with their families.

The active volunteer firefighters cannot see the value of PPV and are angry that the annual picnic and party is being deferred in favor of the Chief's latest gadget. A number of volunteers are threatening to boycott the department unless the Chief changes his mind. Chief Barnes has assigned the responsibility for acquisition of the PPV fan and the development of a training program for its use to Training Chief Fred Williams and the four other members of his Training Committee. The Chief has stressed the importance to all committee members of accepting this modern and innovative tactical tool.

Your task (as a group) is to analyze the situation and resistance to change and develop strategies for successfully implementing the change. In 20 minutes be prepared to summarize your problem, recommend a solution, and give your reasoning.

I. Which of the following "barriers to change" appear to be present in your assigned scenario? Check appropriate choices.

- ❑ lack of vision
- ❑ history of poor implementation
- ❑ lack of support from middle management
- ❑ lack of understanding
- ❑ low risk-taking environment
- ❑ no-consequence management
- ❑ lack of clear communication
- ❑ lack of planning for resistance
- ❑ poor management of resistance
- ❑ lack of time
- ❑ poor followthrough
- ❑ lack of union support
- ❑ lack of synergy
- ❑ rhetoric unsupported by results

II. Considering the above-noted barriers, which of the following change strategies would be most appropriate to employ for your assigned scenario? Check all that apply and make notes as appropriate.

❑ Work to build trust between employees and administration.

_____

❑ Identify who will be most affected by the change and involve them in the decision process. _____

_____

❑ Empower employees to increase productivity and "buy in." _____

_____

❑ Hold employees accountable for their work product. _____

_____

III. Consider the four stages of response (as noted below) that most people go through when faced with impending change. In the spaces provided, check one or two indicators for each stage and note tools to use to help manage the change process at each stage.

1. Stage 1: Shock.

   a. Indicators:

      ❑ People view change as a threat.
      ❑ Low productivity; people cannot rationalize change.

   b. Management tools:

      ❑ Help employees look for common ground.
      ❑ Give regular information and visible support.
      ❑ Provide clear statements of work expectations.
      ❑ Treat for psychological shock (time and emotional support).

2. Stage 2: Retreat.

   a. Indicators:

      - ❑ People defend their old ways.
      - ❑ There is anger, anxiety, and refusal to let go of the past.

   b. Management tools:

      - ❑ Help employees to identify comfort zones.
      - ❑ Identify areas of stability; what's not changing.
      - ❑ Encourage risk taking with rewards, resources, and support.

3. Stage 3: Acknowledgment.

   a. Indicators:

      - ❑ A sense of grief and a sadness over the loss.
      - ❑ People begin to let go as they see the value of what is coming.

   b. Management tools:

      - ❑ Involve people in the planning and decisionmaking process.
      - ❑ Encourage risk taking through showing organizational support.
      - ❑ Emphasize that everyone is learning from the process.

4. Stage 4: Adaptation and change.

   a. Indicators:

      - ❑ People are ready to establish new routines and help each other succeed.
      - ❑ Risk taking relative to changing work patterns is fully used.

b. Management tools:

- ❑ Implement the plan.
- ❑ Encourage and support risk taking.
- ❑ Ensure proper monitoring so information travels in all directions.
- ❑ Make corrections as needed and communicate them accordingly.

IV. Briefly describe the monitoring and evaluating process that you would establish to ensure that the desired results of the change were being achieved.

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Woodall, L. Bryant. "Managing Change in the Fire Department." Raleigh, NC: Executive Fire Officer Program; Executive Leadership, February 1992.

Executive Fire Officer Applied Research paper from the National Fire Academy's Executive Fire Officer Program outlines some of the problems and concerns faced by the Raleigh, NC, Fire Department when implementing organizational changes.

MODULE 5: COURSE CONCLUSION

OBJECTIVES

The students will:

1. List major points learned during the training course.

2. Pass the 20-question final examination.

MOVING INTO THE FUTURE

As we review and discuss each of the four course goals (the terminal objectives for Modules 1 through 4), take notes on the specifics of what you plan to accomplish when you return to your jobs.

Module 1: Redefining the Present

> Terminal Objective: The students will be able to employ creative approaches to identify problems having an impact on organizational effectiveness.

Important points about this module:

Specific actions I will take to use this information:

Module 2: Finding Solutions in the Quality Environment

Terminal Objective: Given modern organizational problems, the students will be able to apply creative group problem-solving methods and describe the importance of continuous improvement within the fire service.

Important points about this module:

Specific actions I will take to use this information:

Module 3: Justifying Decisions

Terminal Objective: The students will be able to quantify problems and solutions, and use the information to justify a recommendation.

Important points about this module:

Specific actions I will take to use this information:

Module 4: Managing Change in the Fire Service Environment

Terminal Objective: The students will be able to explain why people resist change and develop strategies for implementing change within the fire service environment.

Important points about this module:

Specific actions I will take to use this information: